

Economic Impact of the University of North Carolina at Asheville



Conducted by



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Executive Summary

As the dedicated liberal arts institution in the University of North Carolina system, UNC Asheville kindles learning by offering students an intellectually rigorous education that builds critical thinking and workforce skills to last a lifetime. Small class size, award-winning faculty and a nationally acclaimed undergraduate research program foster innovation as well as recognition. About 3,700 undergraduate students and about 300 full- and part-time faculty bring the campus alive with a genuine hunger to understand and contribute to the human experience. Amid the culturally rich setting of Asheville, North Carolina, in the Blue Ridge Mountains, it's all designed to spark a lifelong quest to know more — a fire that will grow brighter in the future.

The university is a critical component of Asheville's creative economy. Through its faculty, students, staff, and facilities, UNC Asheville serves as the academic, cultural, economic, and social nexus of the Asheville region. In the report that follows, the economic impact of the University for fiscal year 2012 on the Asheville North Carolina metro area is explained on many levels. The study examines the annual impact of:

- Campus Operations (\$153.5 million)
- Student Spending (\$36.3 million)
- Graduate Education Premium (\$64.1 million)
- Outside Visitors (\$6.4 million)
- New Resident Attraction (\$7.6 million); and
- Capital Spending (\$6.4 million)

The total economic impact of UNC Asheville is \$268 million. Compared to the last economic impact study in 1995 (when adjusting for inflation), UNC Asheville's total impact has increased by over \$100 million. In all categories, UNC Asheville has positively impacted the region with significant effects from faculty, staff, and student spending. Operationally, the university also contributes heavily to the local economy in terms of regular purchasing of products and services to run the university. On all levels, the university contributes both monetarily and through employment, both direct and indirect. Local jobs supported amount to 2,592 individuals.

Of note is the influence of the Osher Lifelong Learning Institute (OLLI). It is well documented that the City of Asheville attracts retirees to the region. OLLI conservatively estimates that it attracts 100 new households a year as a result of their center's activities. The economic impact of the center alone is around \$7.6 million.

To conclude, UNC Asheville can be viewed as an engine of economic growth within the region. While it is impossible to put a value on the cultural impact of the institution, we know through our students and the many events held on campus that the university plays a critical role in the creative economy. UNC Asheville's regional impact is strong and affirms its standing as the academic, cultural, economic, and social nexus of the region.

Finding Highlights

- Economic activity generated by UNC Asheville supports 2,592 local jobs, adds \$105.5 million in local income, and raises total economic output in the Asheville area by \$268 million.
- For every dollar the state of North Carolina appropriates to UNC Asheville:
 - Income increases by \$2.96 in the Asheville area.
 - Total economic output increases by \$7.52 in the Asheville area.
- Economic activity generated by UNC Asheville increases annual tax revenues by more than \$35.8 million dollars; \$14.8 million in state & local taxes, and \$21 million in Federal taxes.
- On-campus employment accounts for less than one-third of the local jobs UNC Asheville supports.
 - More than 1,800 local supported jobs are off-campus in industries well-outside of education. For example, UNC Asheville supports 442 jobs in *Retail Trade*, 266 jobs in *Real Estate*, 246 jobs in *Accommodation & Food Services* and 243 jobs in *Health Care & Social Assistance*.
- UNC Asheville students spend over \$30 million annually in the local economy.
 - Student spending annually supports 506 local jobs, raises economic output by \$36.3 million, and increases tax revenues by \$6.9 million.
- Graduates of UNC Asheville living in the Asheville area increase local earnings by \$85 million on an account of having attained a Bachelor's or Graduate's degree.
 - The graduate *education premium* supports 588 local jobs by means of added spending, raises economic output by \$64 million, and increases tax revenues by \$8.6 million.
- UNC Asheville attracts new residents to the Asheville area. Survey results from the *Osher Lifelong Learning Institute* attribute the annual relocation of 100 new households, partially on account of the Institute's activities and introduction to the community.
 - Added local spending from new 100 households supports 69 local jobs, raises economic output by \$7.6 million, and increases tax revenues by \$1 million.
- Visitors who traveled from outside the Asheville area to attend or participate in a UNC Asheville event spend an estimated \$4.5 million annually in the local economy.
 - The visitor spending annually supports 95 local jobs, raises local economic output by \$6.4 million, and increases tax revenues by \$1.1 million.

Introduction

Background & Purpose

In December of 2012 the University of North Carolina Asheville retained SYNEVA Economics LLC to conduct a comprehensive analysis of the University's impact upon the Asheville North Carolina regional economy. The last time an economic impact analysis had been performed on the University was early 1995.

The purpose of the analysis was to gain a greater understanding and appreciation of the University's economic effects upon the region. The analysis is expected to objectively quantify local spending that occurs as a result of the presence of UNC Asheville; and track that spending as it moves through the local economy. Results of the analysis can demonstrate the economic contribution and value of UNC Asheville in terms of local supported jobs, increased income, raised economic output, and additional tax revenues generated.

Limitations

Economic impact analyses use spending as the primary factor to capture the effects of an economic activity. Spending presents a quantifiable variable from which an economist can reliably model and track where and how dollars will flow in a particular situation. While spending is an important element, it fails to capture broader social and cultural impacts. This is a severe shortcoming in the context of measuring the impact of a University; an institution that at its core widely impacts the local social and cultural environment. Issues such as innovation or creativity, which are increasingly recognized as critical factors in economic development, are rooted within social or cultural forces and are thus largely untouched by an analysis based primarily on spending. As such, the reader should recognize that the results presented in this analysis likely capture only a small portion of the actual total impact that UNC Asheville has on the Asheville area.

Methodology

To measure economic impacts the IMPLAN[®] system¹ was employed. IMPLAN[®] is an input-output model that is comprised of software and regional data sets. IMPLAN[®] is an acronym for IMPact analysis for PLANning. The IMPLAN[®] model was originally developed by the USDA Forest Service in cooperation with the Federal Emergency Management Agency (FEMA) and the USDI Bureau of Land Management to assist in resource management and planning. Currently the model is used by dozens of public, private, and academic organizations.

The overriding objective of the model is to measure the full economic impact to a local economy as a result of a specific economic activity. The model is built upon a matrix detailing the input-output

¹ Minnesota IMPLAN Group, Inc., 1725 Tower Drive West, Suite 140, Stillwater, MN 55082



relationships among industries and consumers. The primary matrix structure is derived from the National Bureau of Economic Analysis's Benchmark Input-Output Model. The national model was realigned to match the regional Asheville economy. Output ratios and imports for over 500 industrial sectors in the area are assigned. Purchase coefficients are derived to measure the percentage of intermediate and final demands that are satisfied from local production and the percentage that are imported from outside the area. Consumer expenditure patterns, price deflators, industry employment levels, household income groups and the area population are also factored in for the local economy.

The analysis measures the impacts occurring in the Asheville North Carolina metropolitan area. The Asheville metropolitan area is comprised of four counties (Buncombe, Haywood, Henderson, and Madison) located in the western part of North Carolina (Figure 1). The U.S. Census Bureau delineates a metropolitan area based on worker flows and the presence of a dense central urban core; terming the entire area a single economic entity. The City of Asheville in Buncombe County is the metropolitan area's urban core, and worker flows from and to the surrounding three counties demonstrate strong cross-boundary economic linkages. UNC Asheville is located in central Buncombe County. In the report, references to the *local economy*, *community* or *area* all denote the Asheville North metropolitan area.

Results are presented for a single one year period, based on information covering the University's Fiscal Year 2011-2012.

Data collection occurred primarily via information provided by the University's Office of Institutional Research, Finance and Campus Operations, a survey form sent to the University's centers and associated organizations, and personal interviews with University personnel for additional clarification and direction.

The economic impacts are measured as three local effects: *direct*, *indirect*, and *induced*.² Each of these effects is expressed in terms of their effect on jobs (local employment), income (local wages and proprietor income), output (the value of industry production), and tax revenues.

² **Direct** effects are those initial changes occurring to a firm in expenditures or production as a result of a change in demand. **Indirect** effects occur to industries in the backward linked industries that supply the firm. **Induced** effects result from household spending generated by the additional income received in the local area. A full description can be found in *Definitions*.

Figure 1
Four-County
Asheville Metropolitan Area



UNC Asheville Total Economic Impact

UNC Asheville's total economic impact is the sum of five major economic components:

1. Campus Operations
2. Student Spending
3. Outside Visitors
4. Graduate Education Premium
5. Annual New Resident Attraction

The impacts of each of these components is examined individually further in the report. An additional sixth component, *capital spending*, is also analyzed (page 20) but not included in the total economic impact due to high annual variability and the inability to forecast near term spending based on historic patterns. Planned future improvements by UNC Asheville Athletics is also included in the section on capital spending.

UNC Asheville's total economic impact results in an increase of \$268 million of output in the Asheville area (Table 1). The University supports 2,592 local jobs annually and raises labor income by \$105.5 million. Local economic activities stimulated by UNC Asheville generate additional tax revenues; increasing state and local revenues by \$14.7 million annually, and by \$21 million in Federal revenues (Table 2).

In terms of a return on investment, UNC Asheville appropriations from the state of North Carolina totaled \$35,659,695 in Fiscal Year 2011-2012; meaning for every dollar appropriated labor income increased by \$2.96 in the Asheville area, and total economic output increased by \$7.52 in the Asheville area.

Among the five major economic components of UNC Asheville's total impact when counting direct, indirect and induced effects, *Campus Operations* is unsurprisingly the largest contributor, accounting for 51 percent of the total jobs supported, 65 percent of total labor income, 57 percent of total output and 50 percent of the total tax revenue generated (Tables 3-6, Figures 3-5).

It should be noted that *Campus Operations* numbers also include indirect and induced impacts; meaning these activities represent purchases with off-campus businesses in the Asheville economy. In these terms, on-campus direct employment of 732 accounts for less than one-third of the total 2,592 local jobs supported in the Asheville area (Figure 2 and Table 3).

An examination of employment impacts by industry demonstrates the far reaching effects of UNC Asheville on the Asheville area (Table 7). More than 1,800 local supported jobs are off-campus in industries well-outside of education. For example, UNC Asheville supports 442 jobs in Retail Trade, 266 jobs in Real Estate, 246 jobs in Accommodation & Food Services and 243 jobs in Health Care & Social Assistance.

Table 1
UNC Asheville Total Economic Impact

Effects	Employment	Labor Income	Output
Direct	1,226	\$60,943,796	\$114,288,722
Indirect	306	\$8,316,329	\$38,113,758
Induced	1,060	\$36,258,440	\$115,598,333
Total	2,592	\$105,518,565	\$268,000,813

Table 2
UNC Asheville Total- Tax Revenues Generated

State and Local	\$14,774,567
Federal	\$21,054,900

Figure 2
UNC Asheville- Local Employment Supported Major Components

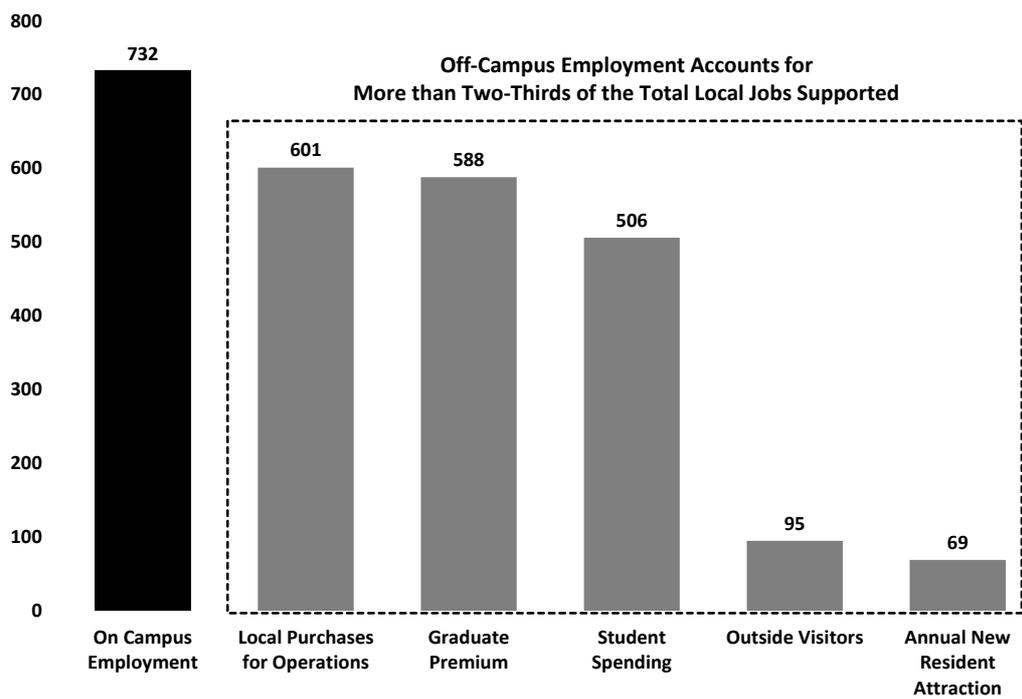


Figure 3
UNC Asheville- Local Employment Supported
Major Components by Effect

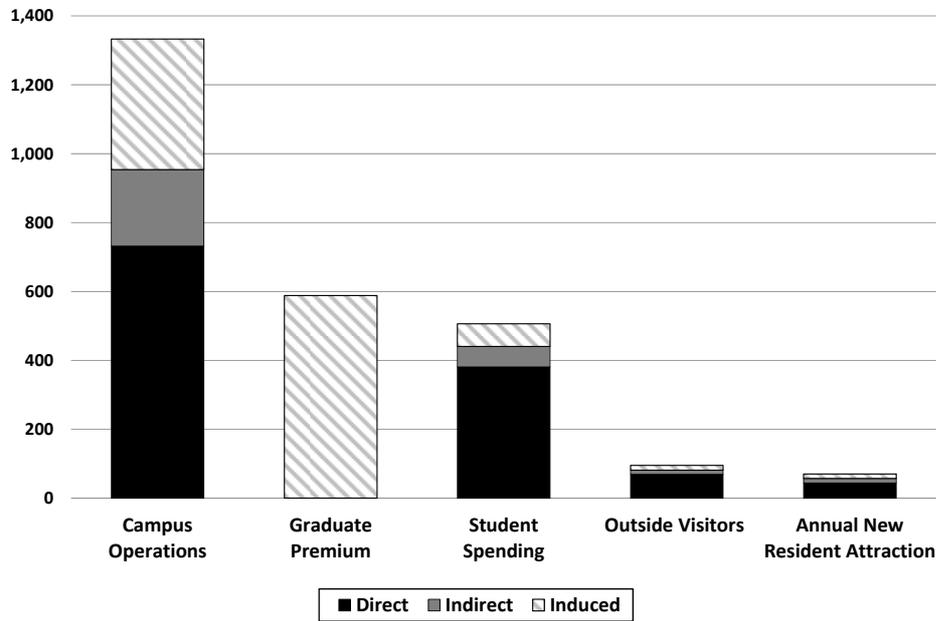


Table 3
UNC Asheville- Employment Impacts
Major Component Breakdown

	Direct	Indirect	Induced	Total
UNC Asheville Total Economic Impact	1,226	306	1,060	2,592
Major Components:				
Campus Operations	732	222	379	1,333
Student Spending	381	59	66	506
Outside Visitors	69	12	14	95
Graduate Premium	0	0	588	588
Annual New Resident Attraction	44	13	13	69

Table 4
UNC Asheville –Labor Income Impacts
Major Component Breakdown

	Direct	Indirect	Induced	Total
UNC Asheville Total Economic Impact	\$60,943,796	\$8,316,329	\$36,258,440	\$105,518,565
Major Components:				
Campus Operations	\$49,753,595	\$5,967,959	\$12,972,871	\$68,694,425
Student Spending	\$8,042,930	\$1,601,103	\$2,267,845	\$11,911,877
Outside Visitors	\$1,602,223	\$366,932	\$460,859	\$2,430,013
Graduate Premium	\$0	\$0	\$20,106,473	\$20,106,473
Annual New Resident Attraction	\$1,545,059	\$380,333	\$450,575	\$2,375,967

Figure 4
UNC Asheville- Output Impact
Major Components by Effect

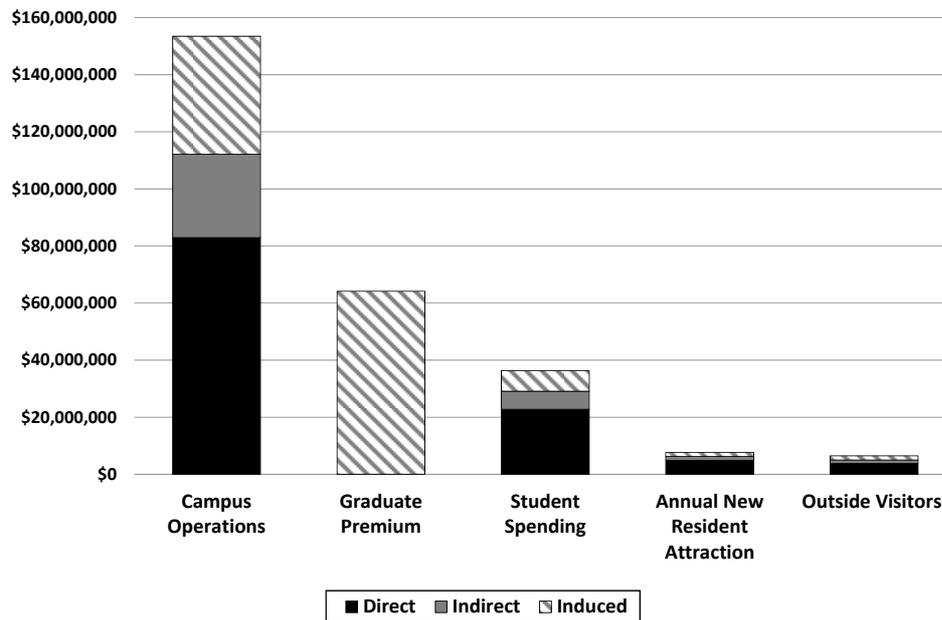


Table 5
UNC Asheville Output Impacts
Major Component Breakdown

	Direct	Indirect	Induced	Total
UNC Asheville Total Economic Impact	\$114,288,722	\$38,113,758	\$115,598,333	\$268,000,813
Major Components:				
Campus Operations	\$82,914,245	\$29,222,327	\$41,360,312	\$153,496,884
Student Spending	\$22,797,147	\$6,301,273	\$7,226,472	\$36,324,893
Outside Visitors	\$3,730,639	\$1,242,456	\$1,468,620	\$6,441,715
Graduate Premium	\$0	\$0	\$64,106,820	\$64,106,820
Annual New Resident Attraction	\$4,846,669	\$1,347,691	\$1,435,889	\$7,630,250

Table 6
UNC Asheville – Tax Revenues Generated
Major Component Breakdown

	State & Local	Federal	Total
UNC Asheville Total Economic Impact	\$14,774,567	\$21,054,900	\$35,829,467
Major Components:			
Campus Operations	\$5,644,456	\$12,498,312	\$18,142,768
Student Spending	\$3,915,645	\$3,008,903	\$6,924,548
Outside Visitors	\$592,500	\$514,835	\$1,107,335
Graduate Premium	\$4,118,341	\$4,497,668	\$8,616,009
Annual New Resident Attraction	\$503,638	\$535,214	\$1,038,852

Figure 5
UNC Asheville- Annual Tax Revenues Generated
Major Component Breakdown

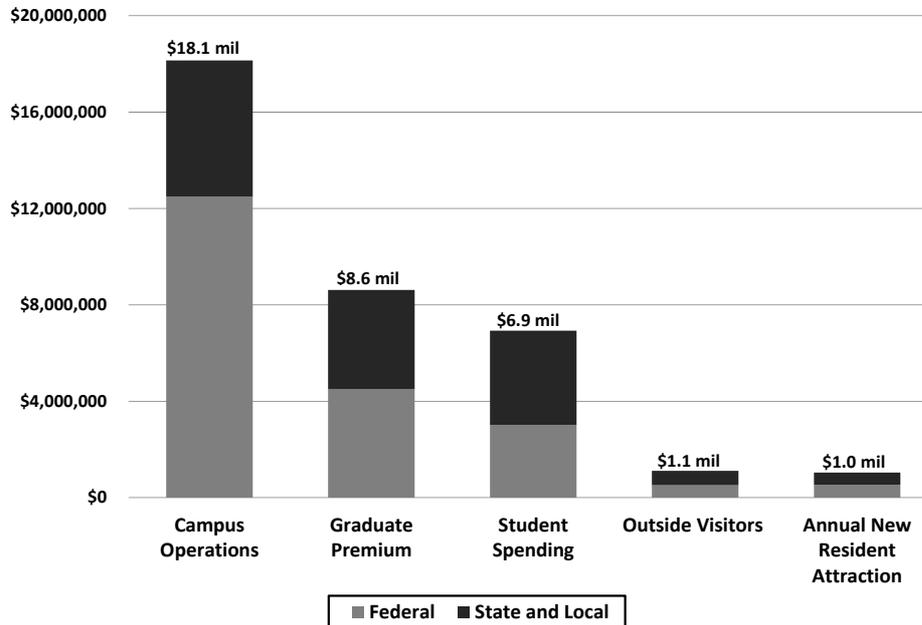


Table 7
UNC Asheville- Employment Impacts
By Industry Sector

Industry	Direct	Indirect	Induced	Total
Educational Services	699	8	33	740
Retail Trade	225	3	215	442
Real Estate & Rental & Leasing	100	88	79	266
Accommodation & Food Services	100	22	124	246
Health Care & Social Assistance	11	0	232	243
Nonprofits & Misc. Services	67	16	92	175
Administrative & Waste Services	0	56	64	120
Professional & Technical Services	1	33	49	83
Arts, Entertainment, & Recreation	12	4	31	47
Transportation & Warehousing	7	14	26	47
Finance & Insurance	1	8	33	42
Other Government	0	20	13	34
Wholesale Trade	2	4	28	34
Construction	-	12	13	25
Information	1	8	11	20
Manufacturing	0	3	5	9
Agriculture & Forestry	0	2	7	9
Utilities	0	4	2	7
Management of Companies & Enterprises	-	1	3	4
Total	1,226	306	1,060	2,592

Major Components:

UNC Asheville Campus Operations

UNC Asheville Campus Operations include the impacts of operating expenses, faculty & staff spending, and five closely associated organizations that maintain their own separate accounts.

Operating expenses include the regular purchasing of products and services to run the University. For Fiscal Year 2011-2012 the total operating expenses for UNC Asheville equaled \$79,705,207.³ To avoid counting purchases of products and services outside the Asheville region, local purchase ratios were employed based on national university spending patterns among 262 categories and the availability of local suppliers. For example, nearly all of routine automotive repair of University vehicles is expected to occur through local providers, while only five percent of periodicals purchased would expect to come from local publishers.

As of Fiscal Year 2012, UNC Asheville engaged 699 permanent employees; 617 full-time and 82 part-time. Total annual salaries and benefits for these employees equaled \$48,131,283. As faculty and staff spend their earnings in the Asheville economy they also raise local economic activity, an activity not captured in the initial analysis of operating expenses.

There are five local organizations that are closely associated to UNC Asheville, although their economic activities are not captured within the University's financial statements. These entities are separate nonprofit legal entities that maintain their own financial accounting; however their presence is highly dependent on the existence of UNC Asheville. Total operating expenses for the five UNC Asheville associated organizations was \$1,276,873 in Fiscal Year 2012. The organizations are:

- The Center for Craft, Creativity & Design, Inc.
- The Center for Diversity Education
- Family Business Forum
- The University of North Carolina at Asheville Foundation, Inc.⁴
- University Botanical Gardens at Asheville, Inc.

After accounting for nonlocal purchases, UNC Asheville's campus operations support 1,333 total local jobs; 732 directly, 222 indirectly and 379 induced (Table 8). In terms of income activity, campus operations spending cause local labor income to increase by \$68.9 million. Annually, total economic output increases by \$153.4 million in the Asheville region as a result of spending on operations by UNC

³ Financial Statement Audit Report, The University Of North Carolina At Asheville

⁴ All transfers to the University by the University of North Carolina at Asheville Foundation, Inc. were excluded.

Asheville. As local purchases are made they generate additional tax revenues; increasing state and local revenues by \$5.6 million annually, and by \$12.4 million in Federal revenues (Table 9).

A sample of supported local jobs resulting from UNC Asheville campus operations demonstrates the wide-ranging impacts as spending flows through the local economy; examples include 98 jobs in *Real Estate*, 59 jobs in *Restaurants & Food Services*, and 40 jobs in *Professional, Scientific & Technical Services*.

Table 8
UNC Asheville Campus Operations

Effects	Employment	Labor Income	Output
Direct	732	\$49,753,595	\$82,914,245
Indirect	222	\$5,967,959	\$29,222,327
Induced	379	\$12,972,871	\$41,360,312
Total	1,333	\$68,694,425	\$153,496,884

Table 9
UNC Asheville Campus Operations- Tax Revenues Generated

State and Local	\$5,644,456
Federal	\$12,498,312

UNC Asheville Student Spending

UNC Asheville student enrollment as of Fall 2011 totaled 3,665. Of these students, 2,569 (70%) lived off-campus, with the remaining 1,096 (30%) living on-campus. Based on the *yearly estimated cost of attendance* expected local spending figures were derived for each of the two groups of students. Spending on tuition, fees, books, supplies, loan fees, and health insurance was not included. Off-campus students' spending comprises room & board, transportation,⁵ and personal items. On-campus students' spending comprises transportation and personal items. In total, estimated annual local student spending equals \$30,120,338.

Local spending by UNC Asheville students supports 506 local jobs (Table 10). In terms of income activity, student spending causes local labor income to increase by \$11.9 million. Annually, total economic output increases by \$36.3 million in the Asheville region as a result of student spending. As student spending occurs it generates additional tax revenues; increasing state and local revenues by \$3.9 million annually, and by \$3 million in Federal revenues (Table 11).

⁵ The added transportation cost for out-of-state students was allocated across all students.

A sample of local industries impacted by UNC Asheville student spending includes annually supporting 106 jobs in *Real Estate*, 69 jobs in *Restaurants* and 22 jobs in *Retail Grocery Stores*.

Table 10
UNC Asheville Student Spending-Local Impacts

Effects	Employment	Labor Income	Output
Direct	381	\$8,042,930	\$22,797,147
Indirect	59	\$1,601,103	\$6,301,273
Induced	66	\$2,267,845	\$7,226,472
Total	506	\$11,911,877	\$36,324,893

Table 11
UNC Asheville Student Spending-Additional Tax Revenues Generated

State and Local	\$3,915,645
Federal	\$3,008,903

UNC Asheville Outside Visitors

UNC Asheville attracts outside visitors⁶ for a variety of events. While sporting events draws the majority of outside visitors; educational and cultural proceedings also attract outside visitors to the campus. For this analysis only overnight visitors attending specific UNC Asheville events are counted. As such, day visitors, and informal visits from family or friends are not included. Thus the full economic impacts are likely underestimated. Over Fiscal Year 2011-2012 it is estimated that \$4.5 million was spent locally by outside visitors in the Asheville area due to UNC Asheville events.

UNC Asheville sports events included NCAA I baseball, basketball, soccer, tennis, and volleyball home competitions. In addition, collaborative partnerships between UNC Asheville Athletics, University Enterprises, Asheville Buncombe Regional Sports Commission, and other community entities served as catalysts for hosting the Big South Men’s Basketball Championships, the Southern Conference Women’s Basketball Championships, the ACC/Crossfire Basketball Challenge, High Neighbors Volleyball Competitions, and Gala Gymnastic Competitions.

Additionally, the Osher Lifelong Learning Institute, Alumni Relations, Center for Craft, Creativity & Design, National Environmental Modeling and Analysis Center, and the Center for Health & Wellness all hosted events with significant outside visitor impacts.

⁶ Outside visitors only includes residents from outside the Asheville metropolitan area, under the reasoning that economic activity by local residents does not represent new spending.

Spending patterns of outside visitors are derived from two methodologies. For sporting events a model of player and event attendee spending developed by the *National Association of Sports Commissions* was employed.⁷ For nonsporting events a model of area leisure visitor spending previously utilized by the *Asheville Area Chamber of Commerce* was adopted.⁸

Spending by outside visitors at UNC Asheville events annually supports 95 local jobs (Table 12). In terms of income activity, the outside spending causes local labor income to increase by \$2.4 million. Annually, total economic output increases by \$6.4 million in the Asheville region as a result of the spending by outside visitors. As spending occurs it generates additional tax revenues; increasing state and local revenues by \$592 thousand annually, and by \$514 thousand in Federal revenues (Table 13).

A sample of the local industries impacted by outside visitors to UNC Asheville events includes annually supporting 19 jobs in *Restaurants & Food Services* and 15 jobs in *Accommodations*. These two local industries experience resulting annual increases in total economic output by \$1 million and \$1.5 million respectively.

Table 12
UNC Asheville Outside Visitors -Local Impacts

Effects	Employment	Labor Income	Output
Direct	69	\$1,602,223	\$3,730,639
Indirect	12	\$366,932	\$1,242,456
Induced	14	\$460,859	\$1,468,620
Total	95	\$2,430,013	\$6,441,715

Table 13
UNC Asheville Outside Visitors - Tax Revenues Generated

State and Local	\$592,500
Federal	\$514,835

⁷ Based on: 1) estimates of the number of visitors at UNC Asheville sporting events, 2) player totals and overnight stays for UNC Asheville hosted home events of 13 team sports, 3) expected event attendee spending patterns from the National Association of Sports Commissions, adjusted for inflation and to local costs. The spending patterns are based on 25 sporting event studies conducted in Detroit, San Antonio, Virginia Beach, Dallas, St. Louis, San Francisco, Kansas City, Columbus, Cleveland and Providence. Calculating and Reporting Economic Impact Results: A Guide for NASC Members, National Association of Sports Commissions (NASC),2007

⁸ Per person daily spending of \$171.45 proportioned into eleven expenditure categories, based on surveys of area tourists, as developed by the Economic Development Coalition Asheville-Buncombe County, 2009

UNC Asheville Graduate Education Premium

This study gauges economic impacts primarily by measuring the changes in local spending. To truly measure the local value of a postsecondary degree this analysis would need to include such factors as added employment opportunities, increased productivity, improvements in quality of life, and other more intangible, yet significant, variables. As such it should be recognized that these results are limited; capturing only a very small portion of the true community impacts.

Presently 5,611 UNC Asheville alumni reside in the four-county Asheville metro.⁹ According to the U.S. Census Bureau, the median annual earnings for Asheville metro residents over the age of 25 who have attained a Bachelor's or Graduate degree is \$15,156 greater than those who have not.¹⁰ Annually then, UNC Asheville alumni should expect to add \$85 million in local earnings as an account of having attained a Bachelor's or Graduate degree.

The increase in local spending from the earnings premium of UNC Asheville graduates supports 588 local jobs¹¹ (Table 14). In terms of income activity, the added spending causes local labor income to increase by \$20.1 million. Annually, total economic output increases by \$64.1 million in the Asheville region as a result of increased spending. As the added spending occurs it generates additional tax revenues; increasing state and local revenues by \$4.1 million annually, and by \$4.4 million in Federal revenues (Table 15).

Table 14
UNC Asheville Graduate Premium-Local Impacts

Effects	Employment	Labor Income	Output
Induced	588	\$20,106,473	\$64,106,820
Total	588	\$20,106,473	\$64,106,820

Table 15
UNC Asheville Graduate Premium-Tax Revenues Generated

State and Local	\$4,118,341
Federal	\$4,497,668

⁹ UNC Asheville Fact Book 2011-12, Office of Institutional Research

¹⁰ 2007-2011 American Community Survey 5-Year Estimates. Weighted median annual earnings are \$42,108 for those with a Bachelor's or Graduate degree, and \$26,953 for those with less educational attainment.

¹¹ Because the increase represents an increase in compensation, the impacts are all *induced*.

Annual New Resident Attraction

The presence of a college or university can be a positive determining factor in where people live. Access to collegiate educational programs and cultural or sporting events is generally viewed as a powerful force for attracting new residents. However, actually attributing the number of residents who have moved to the area as a result of the presence of a college or university can be very difficult to document.

UNC Asheville is fortunate to have a campus organization which regularly surveys its participants and quantifies the number that subsequently moves to the area. The Osher Lifelong Learning Institute (OLLI)¹² reports that of its 1,700 members, 90 percent have relocated to the area; and estimates an annual attraction of 100 new households. The data provides a credible baseline from which to estimate impacts. Because the analysis does not account for other sources of new resident attraction, and only counts the impact for the *single year* the resident moves to the Asheville area, the total results likely well underestimate the full impact.

The added local spending from new 100 households¹³ supports 69 local jobs annually (Table 16). In terms of income activity, the added spending causes local labor income to increase by \$2.3 million. Annually, total economic output increases by \$7.6 million in the Asheville region as a result of increased spending of 100 new households. As the added spending occurs it generates additional tax revenues; increasing state and local revenues by \$503 thousand annually, and by \$535 thousand in Federal revenues (Table 17).

Table 16
UNC Asheville New Resident Attraction-Local Impacts

Effects	Employment	Labor Income	Output
Direct	44	\$1,545,059	\$4,846,669
Indirect	13	\$380,333	\$1,347,691
Induced	13	\$450,575	\$1,435,889
Total	69	\$2,375,967	\$7,630,250

Table 17
UNC Asheville New Resident Attraction- Tax Revenues Generated

State and Local	\$503,638
Federal	\$535,214

¹² The Osher Lifelong Learning Institute at UNC A conducts ongoing programs in the arts and humanities, the natural world, civic engagement, wellness, life transition and retirement relocation planning, and intergenerational co-learning.

¹³ To estimate annual household spending; personal consumption expenditures ratios from the U.S. Census Bureau were applied on a weighted average OLLI participant household income of \$88,725.

Capital Spending

Annual capital spending is analyzed in two parts; University-wide over the five previous years, and five years of planned future developments for UNC Asheville Athletics.

University-Wide Historic Capital Spending

A review of UNC Asheville capital spending over the five previous years reveals a high degree of variability between years. Yearly totals ranged from \$4.9 million in 2011 to \$46.4 million in 2012. Construction and timing of large projects like the Wilma M. Sherrill Center are the main reasons for the variability. Subsequently impacts for each year varied widely (Tables 18-20). For example local jobs supported ranged from 23 in 2010 to 780 in 2012.

To offer a credible baseline figure for assessment and planning, a five-year *median* impact was calculated. The annual five-year median number of local jobs supported as a result of capital spending is 61, the rise in labor income is \$2.1 million, and the increase in total output is \$6.4 million. The annual five-year median of tax revenues generated is \$269 thousand state & local, and \$395 thousand Federal.

Table 18
UNC Asheville Capital Spending-Annual Employment Impacts

	2008	2009	2010	2011	2012	Five Year Median
Direct	39	39	14	43	526	39
Indirect	9	9	5	9	108	9
Induced	12	12	4	12	146	12
Total	60	61	23	65	780	61

Table 19
UNC Asheville Capital Spending-Labor Income Impacts

	2008	2009	2010	2011	2012	Five Year Median
Direct	\$1,367,302	\$1,390,541	\$460,119	\$1,472,516	\$17,598,456	\$1,390,541
Indirect	\$320,995	\$325,479	\$142,006	\$328,227	\$3,786,305	\$325,479
Induced	\$393,955	\$400,422	\$140,857	\$420,158	\$4,989,299	\$400,422
Total	\$2,082,252	\$2,116,443	\$742,983	\$2,220,901	\$26,374,060	\$2,116,443

Table 20
UNC Asheville Capital Spending-Output Impacts

	2008	2009	2010	2011	2012	Five Year Median
Direct	\$4,035,761	\$4,093,923	\$1,221,896	\$4,062,604	\$45,895,544	\$4,062,604
Indirect	\$1,058,129	\$1,072,928	\$435,700	\$1,082,241	\$12,491,840	\$1,072,928
Induced	\$1,254,942	\$1,275,543	\$448,769	\$1,338,365	\$15,892,306	\$1,275,543
Total	\$6,348,832	\$6,442,394	\$2,106,366	\$6,483,210	\$74,279,690	\$6,442,394

Table 21
UNC Asheville Capital Spending- Tax Revenues Generated

	2008	2009	2010	2011	2012	Five Year Median
State and Local	\$296,485	\$301,177	\$77,241	\$264,003	\$2,613,435	\$296,485
Federal	\$390,110	\$395,622	\$134,149	\$398,227	\$2,613,435	\$395,622

UNC Asheville Athletics Planned Future Capital Spending

Over the next five years the UNC Asheville Athletics Department expects a combination of major capital improvements and additional athletic scholarships to increase spending by approximately \$1 million annually. The “*Circle of Champions Campaign*” is expected to raise an additional \$5-\$7 million to complete the 2005 UNC Asheville Outdoor Sports Master Plan and increase the athletic scholarship endowment. The construction and completion of the Outdoor Sports Complex will support NCAA regular-season play, Big South Conference Championships, baseball, soccer, lacrosse, youth football, and other local community sports tournaments and organizations. This venue will allow for evening sporting events and year-round access which brings additional people onto campus and into Western North Carolina to spend money in local restaurants, attractions, hotels, and other businesses. Additional scholarship funds will assist UNC Asheville in recruiting, retaining, educating, and graduating student-athletes who become Champions and Leaders.

Each year the economic impact of these activities will support 19 additional local jobs, raise local income by \$670 thousand, and increase total output by \$1.6 million in the community (Table 22).

Activities of the UNC Asheville Athletics Department’s annual capital improvements and additional athletic scholarships will result in \$57 thousand worth of additional state and local tax revenues annually; and \$118 thousand in Federal tax revenues (Table 23).

Table 22
UNC Asheville Athletics Planned Future Improvements
Annual Local Impacts

Impact Type	Employment	Labor Income	Output
Direct Effect	12	\$458,388	\$1,010,700
Indirect Effect	3	\$86,036	\$280,883
Induced Effect	4	\$126,445	\$404,230
Total Effect	19	\$670,869	\$1,695,814

Table 23
UNC Asheville Athletics Planned Future Improvements- Tax Revenues Generated

Federal	\$118,478
State and Local	\$57,712

Definitions

Local Asheville Economy	The local Asheville economy represents the four-county metropolitan statistical area (Buncombe, Haywood, Henderson, and Madison counties).
Time Period	All impacts occur within a one-year period. Primary data for the economic activities were collected for Fiscal Year 2011-2012.
Outside Visitor Spending	<p>Sporting event visitors and participants: based on: 1) estimates of the number of visitors at UNC Asheville sporting events, 2) player totals and overnight stays for UNC Asheville hosted home events of 13 team sports, 3) expected event attendee spending patterns from the National Association of Sports Commissions, adjusted for inflation and to local costs. The spending patterns are based on 25 sporting event studies conducted in Detroit, San Antonio, Virginia Beach, Dallas, St. Louis, San Francisco, Kansas City, Columbus, Cleveland and Providence. <i>Calculating and Reporting Economic Impact Results: A Guide for NASC Members</i>, National Association of Sports Commissions (NASC), 2007</p> <p>Non-sporting event visitors: per person daily spending of \$171.45 proportioned into eleven expenditure categories, based on surveys of area tourists, as developed by the Economic Development Coalition Asheville-Buncombe County, 2009</p>
Direct Effect	The set of expenditures applied to the predictive model (i.e., I/O multipliers) for impact analysis. It is a series (or single) of production changes or expenditures made by producers/consumers as a result of an activity or policy. These initial changes are determined by the analyst to be a result of this activity or policy.
Indirect Effect	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 leaks from the local economy, either through imports or by payments to value added.
Induced Effect	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. This money is recirculated through the household spending patterns causing further local economic activity.
Total Effect	The sum of direct, indirect, and induced effects.
IMPLAN	IMPLAN® (IMpact analysis for PLANning) economic impact modeling system. IMPLAN is used to create complete detailed multi-regional Social Accounting Matrices (SAMs) and Multiplier Models of economies ranging from national to state, county or ZIP-Code levels.
Labor Income	All forms of employment income, including Employee Compensation (wages and benefits) and Proprietor Income.
Output	Output represents the value of industry production. For manufacturers this would be sales plus/minus change in inventory. For service sectors production = sales. For Retail and wholesale trade, output = gross margin and not gross sales.



Firm Profile

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