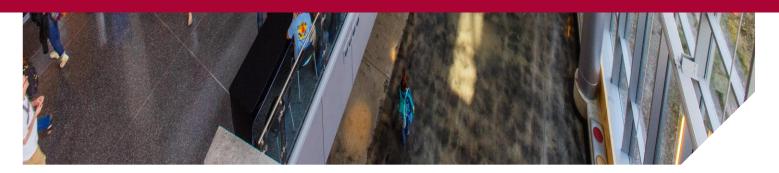


IUPUI

Overall

Beginning Freshmen Entering Student Survey Report

2017



Welcome to the 2017 IUPUI School of Informatics & Computing Entering Student Survey Report

The Entering Student Survey is a yearly survey administered during the first day of a student's orientation. The students are given the link to the survey during a dedicated block of time to ensure they have enough time to complete the survey. The survey is not required to be filled out, but it is encouraged as some responses may be used to ensure they get information to resources to help them succeed in college. Of the 101 School of Informatics and Computing beginning freshmen direct admits in the 2017 cohort, 60 completed the Entering Student Survey. That is a response rate of 59%. The total number of Informatics and Computing premajor students was too low to report on or do comparative analysis.

Key Highlights Overall

- Compared to all other direct-admit students, School of Informatics & Computing directadmit students were less likely to rate themselves higher than their peers on a number of items including mathematical ability and study skills, participate in an internship, co-op, field experience, practicum student teaching, or clinical placement, spend fewer hours preparing for class, and more likely to choose IUPUI because of the availability of specific academic programs (majors).
- 97% of Informatics & Computing direct-admit respondents agree that the IUPUI campus is welcoming.
- 48% of direct-admit respondents reported that being a hard worker is 'Very much like me'.
- Informatics & Computing direct-admit respondents rated themselves highest in 'Academic Ability' with a mean of 3.69 compared to other areas of self-efficacy. All other direct-admit respondents had a mean of 3.97 for the same item.
- 34% of Informatics & Computing direct-admit students plan to spend at least 11 hours 'working for pay on campus' compared to 35% of all other direct-admit respondents planning work at least 11 hours for pay on campus.
- **65%** of Informatics & Computing direct-admit students have at least Some concerns about financing their college education.
- The top 5 reasons respondents decided to attend IUPUI were 'Availability of specific academic programs (majors)', 'Graduates get good jobs', Availability of financial aid/scholarship', 'Job, career, and internship opportunities available in Indianapolis while attending school', 'Career and job opportunities available in Indianapolis after I complete my degree'.
- For School of Informatics & Computing respondents that have chosen a major the number one reason they chose their major was because **it aligned with their interests** (mean 4.53 compared to 4.43 for all other direct-admit respondents).

IUPUI's Vision

To be a leading urban research institution recognized for the success of its students, its advances in health and life sciences, and its intellectual, economic, and cultural contributions to the wellbeing of the citizens of Indianapolis, the state of Indiana, and beyond.

SCHOOL OF INFORMATICS & COMPUTING SURVEY RESPONDENTS DEMOGRAPHICS

	Informatio	s & Computing	All Other		
		ct Admits	Direct-Admits		
esidency	Ν	Percentage	Ν	Percentage	
Indiana Resident	58	96.7	980	90.2	
Non-Resident	2	3.3	107	9.8	
ender					
Female	17	28.3	590	54.3	
Male	43	71.7	497	45.7	
ge					
Under 19	59	98.3	1,069	98.3	
20-25	1	1.7	17	1.6	
Over 25	0	0.0	1	0.1	
thnicity					
White	45	75.0	829	76.4	
Hispanic/Latino	5	8.3	89	8.2	
Black/African American	2	3.3	45	4.1	
American Indian/Alaska Native	0	0.0	1	0.1	
Asian	4	6.7	53	4.9	
Native Hawaiian/Pacific Island	0	0.0	0	0.0	
International	0	0.0	15	1.4	
Two or More Races	4	6.7	53	4.9	
inancial Information					
Received Pell Grant first Fall semester (preliminary)	17	28.3	333	30.6	
ousing					
Living On-Campus	30	50.0	526	48.4	

KEY HIGHLIGHTS IN COMPARISONS BETWEEN SCHOOL OF INFORMATICS & COMPUTING DIRECT ADMIT RESPONDENTS AND ALL OTHER BEGINNING FRESHMEN DIRECT-ADMIT RESPONDENTS

A means comparison analysis was conducted between the 2017 School of Informatics & Computing direct-admit respondents and the all other 2017 beginning freshmen direct-admit respondents who took the Entering Student Survey. For four areas of questions a construct was formed to better analyze differences between the two groups. One of the four constructs were significant at the .05 level.

Construct	Informatics & Computing Direct-Admits Mean	All Other Direct-Admits Mean
Consistency of Interest	2.90	2.60
Organizational Commitment	5.56	5.65
Sense of Belonging	5.47	5.67
Perseverance of Effort	3.80	4.02

Bolded items are significant based on independent samples t-test results (\underline{p} < .05)

The following tables include only the items from each section which are significant based on independent samples t-test results. All items are significant at the p<.05 level while others are significant at the p<.01 or p<.001 level as indicated.

Independent Sample T-test of Significance between 2017 School of Informatics & Computing Direct-Admit Respondents and All Other 2017 Direct-Admit Respondents	Informatics & Computing Direct-Admits Mean	All Other Direct-Admits Mean
Comparisons of Traits to Other Students ¹		
Academic ability***	3.69	3.97
Mathematical ability	3.34	3.61
Study skills***	2.84	3.24
Leadership ability***	3.38	3.74
Ability to work with others that are different from you***	3.62	3.95
Ability to seek out appropriate academic help***	3.17	3.53
Ability to manage finances***	3.07	3.59
Motivation for college work	3.65	3.91
Self-confidence (related to intellectual or academic activities)	3.48	3.75
Self-confidence (related to social activities)***	3.05	3.43
Physical health***	3.28	3.70
Emotional health***	2.93	3.58
Financial Aid		
Do you have any concerns about your ability to finance your college education?***	1.79	1.85

¹ 1=Lowest 10%, 2=Below Average, 3=Average, 4=Above Average, 5=Highest 10%

² 1=None, 2=Some, 3=Major

=p<.01 *=p<.001

Independent Sample T-test of Significance between 2017 School of Informatics & Computing Direct-Admit Respondents and 2017 All Other Direct-Admit Respondents	Informatics & Computing Direct-Admits % Over 15 hours	All Other Direct-Admits % Over 15 hours	
Hours Spent on Activities Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)***	34.4	61.1	
Engaging in volunteer activities***	1.7	8.6	

Independent Sample T-test of Significance between 2017 School of Informatics & Computing Direct-Admit Respondents and 2017 All Other Direct-Admit Respondents	Informatics & Computing Direct-Admits Mean	All Other Direct-Admits Mean
Anticipated Success and Involvement ¹		
Be satisfied wit hcollege life	3.50	3.65
Participate in events or activities on campus	3.17	3.39
Participate in service learning or community service***	2.69	3.09
Work on a research project with a professor	2.95	3.14
Make good choices for personal health (healthy eating, lifestyle, etc.)***	3.21	3.47
Participate in an internship, co-op, field experience, practicum, student teaching, or clinical placement).	2.91	3.42
Decisions to Attend IUPUI ²		
Cost	3.42	3.80
Career and job opportunities available in Indianapolis after I complete my degree***	3.57	3.95
Opportunity for an IU or Purdue Degree**	3.52	3.90
IUPUI's reputation	3.26	3.54
Social Climate/Activities at the College**	3.00	3.37

1 1=No Chance, 2=Very Little Chance, 3=Some Chance, 4=Very Good Chance

² 1= Not Important, 2=Somewhat Important, 3=Moderately Important, 4=Very Important, 5=Extremely Important **=p<.01

Independent Sample T-test of Significance between 2017 School of Informatics & Computing Direct-Admit Respondents and 2017 All Other Direct-Admit Respondents	Informatics & Computing Direct-Admits Mean	All Other Direct-Admits Mean
Reasons for Choosing Major ¹		
Graduates get good jobs	3.80	4.11
Good grades in previous courses***	3.44	3.87
High school classes or college classes that spark my interest or awareness	3.69	4.01
My parents/relatives recommendation	2.35	2.72

¹ 1= Not Important, 2=Somewhat Important, 3=Moderately Important, 4=Very Important, 5=Extremely Important **=p<.01 ***=p<.001

Top 10 Factors in Choosing IUPUI									
School of Informatics & Computing Direct-Admits	Ν	Mean	All Other Direct-Admits	Ν	Mean				
Availability of specific academic programs (majors)	58	4.22	Availability of specific academic programs (majors)	1,046	4.12				
Graduates get good jobs	58	3.97	Job, career, and internship opportunities available in Indianapolis while attending school	1,048	3.99				
Availability of financial aid/scholarship	58	3.79	Availability of financial aid/scholarship	1,048	3.97				
Job, career, and internship opportunities available in Indianapolis while attending school	58	3.72	Graduates get good jobs	1,050	3.96				
Career and job opportunities available in Indianapolis after I complete my degree	58	3.57	Career and job opportunities available in Indianapolis after I complete my degree	1,049	3.95				
Opportunity for an IU or Purdue Degree	58	3.52	Opportunity for an IU or Purdue Degree	1,050	3.90				
Cost	57	3.42	Cost	1,051	3.80				
IUPUI's reputation	58	3.26	IUPUI's reputation	1,045	3.54				
Social opportunities associated with IUPUI located in city of Indianapolis	58	3.09	Social Climate/Activities at the College	1,046	3.37				
A visit to campus	58	3.05	Social opportunities associated with IUPUI located in city of Indianapolis	1,056	3.33				

1=Not Important, 2=Somewhat Important, 3=Moderately Important, 4=Very Important, 5=Extremely Important

SCHOOL OF INFORMATICS & COMPUTING SURVEY RESPONDENTS DEMOGRAPHICS

		s & Computing nit Respondents	All Informatics & Computing Direct-Admit Students		
Residency	Ν	Percentage	N	Percentage	
Indiana Resident	58	96.7	95	94.1	
Non-Resident	2	3.3	6	5.9	
Gender					
Female	17	28.3	30	29.7	
Male	43	71.7	71	70.3	
Age					
19 and Under	59	98.3	99	98.0	
20-25	1	1.7	2	2.0	
Over 25	0	0.0	0	0.0	
Ethnicity					
White	45	75.0	79	78.2	
Hispanic/Latino	5	8.3	6	5.9	
Black/African American	2	3.3	3	3.0	
American Indian/Alaska Native	0	0.0	0	0.0	
Asian	4	6.7	7	6.9	
Native Hawaiian/Pacific Island	0	0.0	0	0.0	
International	0	0.0	0	0.0	
Two or More Races	4	6.7	6	5.9	
Financial Information					
Received Pell Grant first Fall semester (preliminary)	17	28.3	28	27.7	
Housing					
Living On-Campus	30	50.0	536	32.6	

SENSE OF BELONGING*

Please rate how mu	ich you	u agree w	ith each stat	ement					
	N	Mean	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Disagree nor Agree Percentages	Slightly Agree	Moderately Agree	Strongly Agree
The IUPUI campus community has made me feel welcomed	60	6.12	1.7	0.0	0.0	1.7	33.3	10.0	53.3
I feel a sense of belonging to IUPUI	60	5.48	1.7	1.7	1.7	8.3	41.7	18.3	26.7
I see myself as part of the IUPUI community	60	5.53	1.7	0.0	3.3	13.3	31.7	20.0	30.0
I feel that I fit right in on campus	60	5.48	1.7	1.7	1.7	16.7	28.3	20.0	30.0
I feel that I am a member of the IUPUI community	60	5.47	1.7	0.0	3.3	18.3	26.7	21.7	28.3
I feel connected with other IUPUI students	60	5.45	0.0	5.0	3.3	8.3	33.3	25.0	25.0

1=Strongly Disagree, 2=Moderately Disagree, 3=Slightly Disagree, 4=Neither Disagree nor Agree, 5=Slightly Agree, 6=Moderately Agree, 7=Strongly Agree *These 6 items make up the Sense of Belonging construct analyzed in the comparison section of the report Rank ordered by means

COMMITMENT TO IUPUI^{*}

Please rate how muc	h you	agree wit	th each state	ement					
	N	Mean	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Disagree nor Agree Percentages	Slightly Agree	Moderately Agree	Strongly Agree
I am proud to tell others I am going to school here	59	6.08	0.0	1.7	0.0	8.5	20.3	16.9	52.5
I am extremely glad that I chose IUPUI over other colleges	59	5.75	0.0	1.7	0.0	13.6	30.5	15.3	39.0
It is important for me to graduate from IUPUI (e.g., rather than from another college)	59	5.44	3.4	1.7	6.8	6.8	35.6	8.5	37.3
I feel a sense of IUPUI jaguar pride	59	5.46	1.7	0.0	0.0	18.6	33.9	20.3	25.4
IUPUI was my first choice of colleges that I was accepted to or considered applying to	59	5.08	8.5	8.5	6.8	8.5	16.9	11.9	39.0

1=Strongly Disagree, 2=Moderately Disagree, 3=Slightly Disagree, 4=Neither Disagree nor Agree, 5=Slightly Agree, 6=Moderately Agree, 7=Strongly Agree *These 5 items make up the Organizational Commitment construct analyzed in the comparison section of the report

SENSE OF GRIT AND PERSEVERANCE

Please rate how true each statement is about you										
	N	Mean	1-Not at all like me	2	3 Percentages	4	5-Very much like me			
I am a hard worker ¹	59	4.22	1.7	1.7	16.9	32.2	47.5			
I am diligent ¹	59	4.03	0.0	3.4	20.3	45.8	30.5			
I finish whatever I begin ¹	59	3.69	1.7	8.5	28.8	40.7	20.3			
Setbacks don't discourage me ¹	59	3.24	5.1	23.7	25.4	33.9	11.9			
New ideas and projects sometimes distract me from previous ones ²	59	3.37	3.4	20.3	23.7	40.7	11.9			
I have difficulty maintaining my focus on projects that take more than a few months to complete ²	59	3.00	10.2	23.7	33.9	20.3	11.9			
I often set a goal but later choose to pursue a different one ²	59	2.56	10.2	39.0	37.3	11.9	1.7			
I focus on a certain idea or project for a short time but lose interest later ²	59	2.66	15.3	32.2	28.8	18.6	5.1			

1=Not at all like me, 2=2, 3=3, 4=4, 5=Very much like me

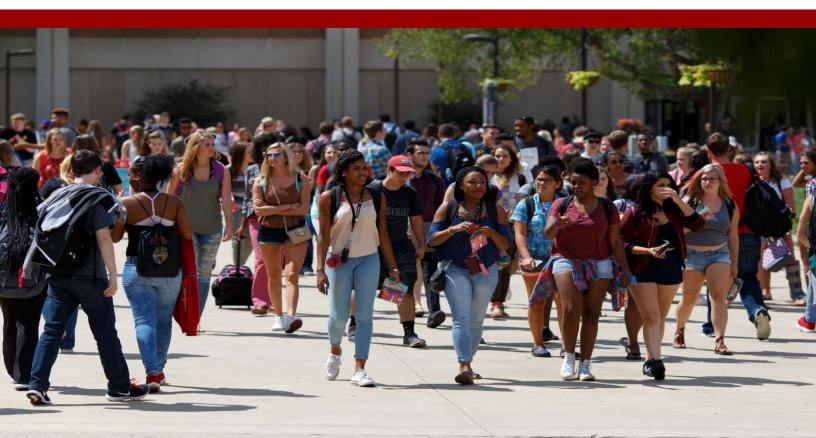
¹ These 4 items make up the Perseverance of Effort construct analyzed in the comparison section of the report

¹ A lower mean on Consistency of Interest indicates higher GRIT consistency of effort.

² These 4 items make up the Consistency of Interest construct analyzed in the comparisons section of the report

Rank ordered by means

¹ Duckworth, A. L. & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (Grit-S). Journal of Personality Assessment, 91(2), 166-174.



SELF-EFFICACY RATINGS

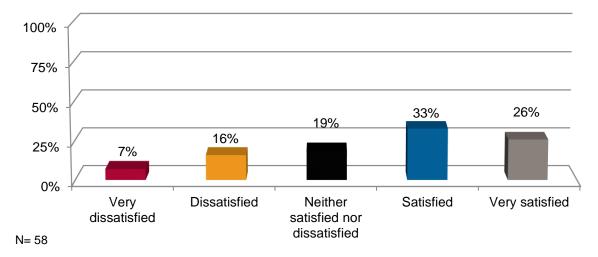
Rate yourself on each of the following traits as compared to the average person your age. We want the most accurate estimate of how you see yourself

	N	Mean	Lowest 10%	Below Average F	Average Percentages	Above Average	Highest 10%
Ability to work with other that are different from you	58	3.62	3.4	8.6	32.8	32.8	22.4
Motivation for college work	57	3.65	1.8	5.3	31.6	49.1	12.3
Academic ability	58	3.69	1.7	0.0	34.5	55.2	8.6
Leadership ability	58	3.38	1.7	19.0	36.2	25.9	17.2
Physical health	58	3.28	3.4	13.8	44.8	27.6	10.3
Self-confidence (related to intellectual or academic activities)	58	3.48	3.4	10.3	31.0	44.8	10.3
Emotional health	58	2.93	10.3	19.0	41.4	25.9	3.4
Ability to seek out appropriate academic help	58	3.17	6.9	19.0	36.2	25.9	12.1
Ability to manage finances	58	3.07	8.6	17.2	39.7	27.6	6.9
Writing ability	58	3.47	1.7	12.1	36.2	37.9	12.1
Self-confidence (related to social activities)	58	3.05	10.3	20.7	32.8	25.9	10.3
Mathematical ability	58	3.34	3.4	10.3	39.7	41.4	5.2
Study skills	58	2.84	1.7	31.0	50.0	15.5	1.7

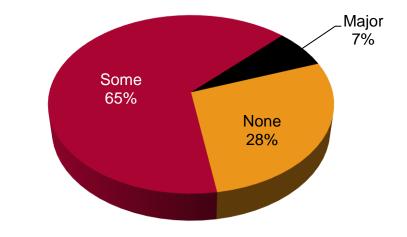
1=Lowest 10%, 2=Below Average, 3=Average, 4=Above Average, 5=Highest 10% Rank ordered by means

FINANCING COLLEGE

How satisfied are you with the amount of financial support (from grants, loans, family members, jobs, or all other sources) you've received so far?



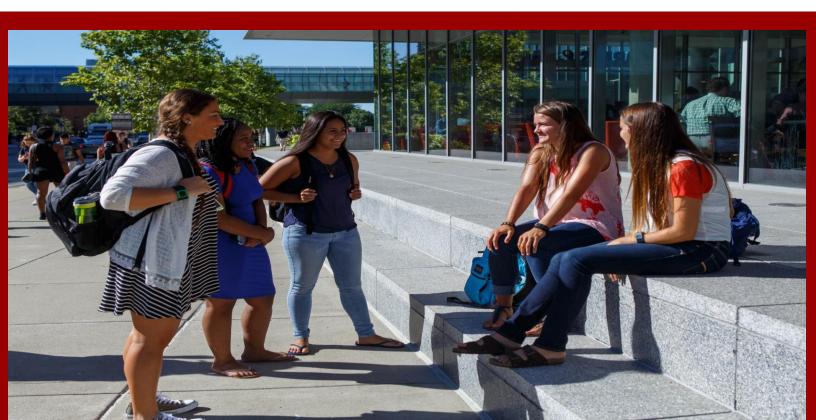
Do you have any concerns about your ability to finance your college education?



N=58

HOURS PLANNED TO SPEND ON ACTIVITIES

following?									More than
	Ν	0	1-5	6-10	11-15	16-20	21-25	26-30	30
	Percentages								
Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)	58	0.0	12.1	24.1	29.3	15.5	10.3	6.9	1.7
Working for pay on campus	58	36.2	8.6	20.7	24.1	6.9	1.7	0.0	1.7
Working for pay off campus	57	31.6	7.0	19.3	21.1	10.5	8.8	0.0	1.8
Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)	58	3.4	34.5	29.3	13.8	8.6	6.9	1.7	1.7
Commuting to class (driving, walking, etc.)	58	3.4	60.3	15.5	6.9	6.9	5.2	1.7	0.0
Relaxing and socializing (watching TV, partying, etc.)	58	0.0	24.1	24.1	31.0	19.0	1.7	0.0	0.0
Providing care for dependents living with you (parents, children, spouse, etc.)	58	56.9	29.3	10.3	1.7	1.7	0.0	0.0	0.0
Taking care of household responsibilities	58	17.2	51.7	17.2	8.6	5.2	0.0	0.0	0.0
Engaging in volunteer activities	58	29.3	39.7	17.2	12.1	1.7	0.0	0.0	0.0
Interacting with on-line social networks (Facebook, Instagram, Twitter, etc.)	58	15.0	41.7	16.7	10.0	6.7	5.0	1.7	3.3



ANTICIPATED SUCCESS, INVOLVEMENT, AND ENGAGEMENT IN HIGH IMPACT PRACTICES

What is your best guess as to the chances you v	vill:					
	N	Mean	No Chance	Very Little Chance	Some Chance	Very Good Chance
			tages			
Be satisfied with college life	58	3.50	1.7	0.0	44.8	53.4
Make good choices for personal health (healthy eating, lifestyle, etc.)	58	3.21	1.7	12.1	50.0	36.2
Participate in events or activities on campus	58	3.17	3.4	12.1	48.3	36.2
Participate in an internship, co-op, field experience, practicum, student teaching, or clinical placement	57	2.91	8.8	21.1	40.4	29.8
Experience stress balancing work and school related responsibilities	58	2.83	6.9	31.0	34.5	27.6
Participate in student clubs/groups	58	3.19	3.4	12.1	46.6	37.9
Get tutoring or peer mentoring help in specific courses	58	3.03	3.4	19.0	48.3	29.3
Exercise on campus	57	3.12	1.8	19.3	43.9	35.1
Work on a research project with a professor	58	2.95	0.0	27.6	50.0	22.4
Participate in service learning or community service	58	2.69	6.9	31.0	48.3	13.8
Experience stress balancing family and school related responsibilities	58	2.83	6.9	31.0	34.5	27.6
Participate in study abroad or international travel related to school	58	2.57	15.5	37.9	20.7	25.9
Enroll in courses during the summer	58	2.50	17.2	29.3	39.7	13.8
Change career choice	58	2.38	10.3	46.6	37.9	5.2
Change major field	58	2.14	19.0	53.4	22.4	5.2
Experience feelings of homesickness	58	1.95	39.7	29.3	27.6	3.4

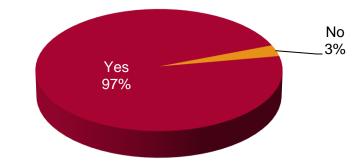
1=No Chance, 2=Very Little Chance, 3=Some Chance, 4=Very Good Chance Rank ordered by means

DECISIONS TO ATTEND IUPUI

In making a decision to choose IUPUI or transfer to IUPUI from another institution, please rate how important the following factors were:							nt the
	N	Mean	Not Important	Somewhat Important	Moderately Important Percentages	Very Important	Extremely Important
Availability of specific academic programs (majors)	58	4.22	1.7	1.7	13.8	37.9	44.8
Graduates get good jobs	58	3.97	3.4	3.4	25.9	27.6	39.7
Job, career, and internship opportunities available in Indianapolis while attending school	58	3.72	1.7	8.6	34.5	25.9	29.3
Career and job opportunities available in Indianapolis after I complete my degree	58	3.57	8.6	10.3	25.9	25.9	29.3
Availability of financial aid/scholarship	58	3.79	5.2	6.9	24.1	31.0	32.8
Opportunity for and IU or Purdue Degree	58	3.52	12.1	10.3	24.1	20.7	32.8
Cost	57	3.42	7.0	17.5	26.3	24.6	24.6
IUPUI's reputation	58	3.26	6.9	15.5	36.2	27.6	13.8
Social Climate/Activities at the College	58	3.00	8.6	27.6	32.8	17.2	13.8
Social opportunities associated with IUPUI located in city of Indianapolis	58	3.09	8.6	32.8	19.0	20.7	19.0
A visit to campus	58	3.05	15.5	15.5	27.6	31.0	10.3
Wanted to live near home	58	2.97	20.7	20.7	20.7	17.2	20.7
Size of IUPUI	57	2.47	21.1	31.6	29.8	14.0	3.5
Type of housing available on campus	58	2.60	36.2	8.6	27.6	13.8	13.8
Resources available for underserved students (LGBTQ, students with disabilities, students of color, veterans, older students, transfer students, etc.)	58	2.57	32.8	19.0	20.7	13.8	13.8
Change in financial situation	58	2.19	44.8	17.2	17.2	15.5	5.2
Ability to live at home while attending college	58	2.66	37.9	12.1	13.8	19.0	17.2
My parents/relatives wanted me to attend	58	1.93	50.0	19.0	22.4	5.2	3.4
Advisor or guidance counselor recommendation	58	2.09	48.3	13.8	24.1	8.6	5.2
Change in family situation	58	1.93	55.2	17.2	12.1	10.3	5.2
Academic difficulty at previous institution or high school	58	2.03	44.8	20.7	22.4	10.3	1.7

1= Not Important, 2=Somewhat Important, 3=Moderately Important, 4=Very Important, 5=Extremely Important Rank ordered by means

Have you chosen a major?



STUDENTS WHO HAVE CHOSEN A MAJOR Reasons for Choosing Major

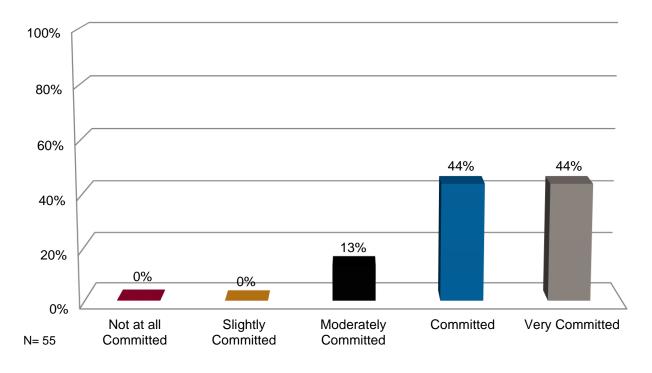
In making a decision to choose your current major, please rate how important the following factors were*:

	N	Mean	Not Important	Somewhat Important	Moderately Important	Very Important	Extremely Important		
		Percentages of Students who have chosen major							
Major is aligned with my interests	55	4.53	1.8	0.0	5.5	29.1	63.6		
Major is aligned with my skills and abilities	55	4.27	1.8	1.8	14.5	30.9	50.9		
Major is aligned with the lifestyle I would like to have	55	4.33	1.8	1.8	12.7	29.1	54.5		
Major is aligned with my personality	55	4.25	1.8	3.6	12.7	30.9	50.9		
Availability of jobs in the field	55	4.00	3.6	1.8	21.8	36.4	36.4		
Graduates get good jobs	54	3.80	7.4	7.4	22.2	24.1	38.9		
High school classes or college classes that spark my interest or awareness	55	3.69	7.3	7.3	16.4	47.3	21.8		
Good grades in previous courses	55	3.44	5.5	14.5	30.9	29.1	20.0		
Starting salaries are high	55	3.56	5.5	7.3	34.5	30.9	21.8		
Major makes people like me feel welcome	55	3.91	3.6	5.5	18.2	41.8	30.9		
Media (TV, social media, newspapers, commercials, movies) that spark my interest or awareness	55	3.27	12.7	20.0	14.5	32.7	20.0		
IUPUI specific communications that sparked my interest or awareness	55	2.82	23.6	7.3	40.0	21.8	7.3		
My parents/relatives recommendation	55	2.35	40.0	16.4	20.0	16.4	7.3		
Advisor or guidance counselor recommendation	55	2.24	45.5	10.9	25.5	10.9	7.3		
My friends recommendation	55	2.25	41.8	20.0	18.2	10.9	9.1		

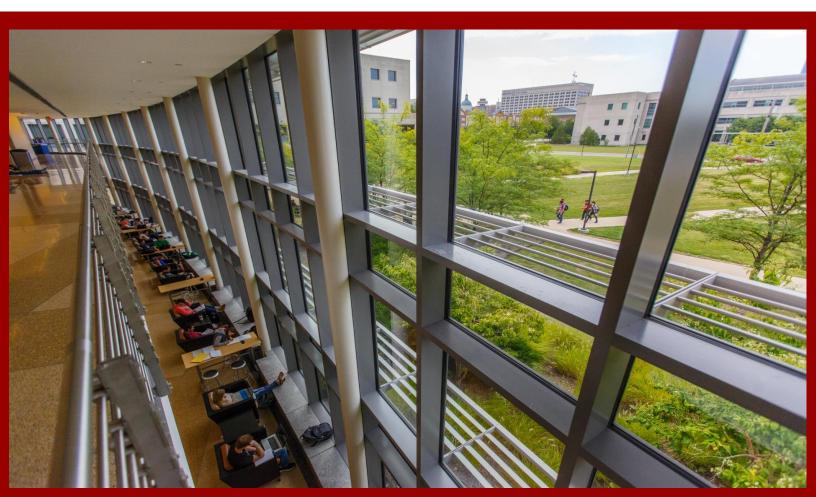
1= Not Important, 2=Somewhat Important, 3=Moderately Important, 4=Very Important, 5=Extremely Important

* Of those who indicated they have chosen a major

Rank ordered by means

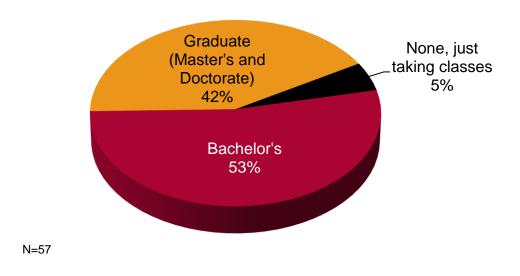


How committed are you to your current major?

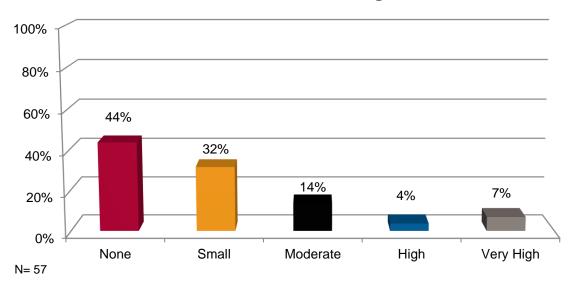


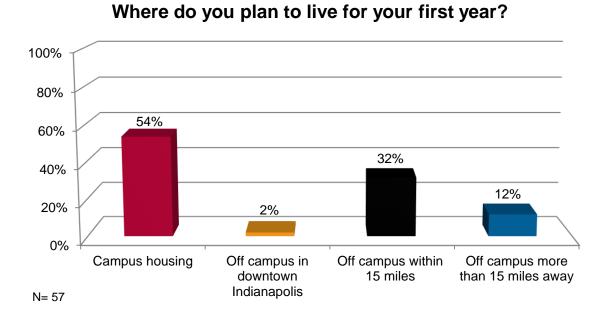
ACADEMIC FUTURE

What is the highest college degree you expect to obtain?



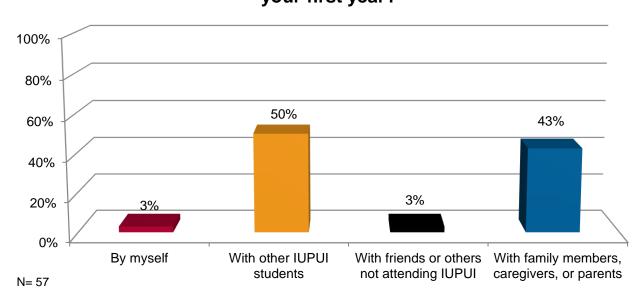
What is the likelihood that you will transfer from IUPUI to another college?





EXPECTED LIVING SITUATION

Which best describes your expected living situation during your first year?



2017 Entering Student Survey

IUPUI JAGUARS

Prepared by Jessicah Rauch (Institutional Research and Decision Support)