

**TO:** Pauline Entin, Dean of the College of Arts & Sciences

**FROM:** Elizabeth Lehr, Director College of Arts & Sciences First-Year Success Program

**RE:** Final report on data collected on student attitudes, retention, and effectiveness of CAS 101

**DATE:** June 17, 2019

## EXECUTIVE SUMMARY

Administering initial and final CAS 101 surveys to all CAS 101 students continued into its eighth year in the Fall of 2018. In Fall 2015 small alterations were made to the myCourses website, continuing the flippable curriculum model, although individual faculty use remains a variable for which we cannot control. This year, matched sets of surveys to compare (where a student took both surveys) was 68% of the CAS 101 population. Students in mixed major sections display a slight edge in GPA in 2018 whereas major only sections performed better in grades received in CAS 101 and cumulative credits earned by the end of the spring 2019 semester. Overall, the data for Fall 2018 shows a increase from last year in Fall GPA, grade in CAS 101, and spring GPA in both major-only and mixed sections.

This report provides an analysis of data from CAS 101. There are three key components to the report.

1. We examine potential year-to-year effects of CAS 101 on GPA and credits earned.
2. We compare results from Fall 2018 with results over time, which allows us to examine whether student attitudes and academic performance are improving.
3. We examine results from Fall 2018 only, with a focus at differences between major-only and mixed sections, as well as ASU, LAR, and CJS students.

In Fall 2018, 546 students completed CAS 101 with a grade from A-F/W. This report relies on two key sources of data: 1) surveys administered at the beginning and end of each semester in CAS 101 and 2) academic data provided by the Office of Institutional Research and Assessment. For the CAS 101 surveys in Fall 2018, 503 students responded to the pre-survey, and 429 responded to the post-survey; 372 students responded to both waves of the survey.

Data from Fall 2018 seem to suggest that students in mixed major sections fare better in academic performance (i.e., GPA) than students in the major-only sections. The data seem to lead to the conclusion that the improvement in Fall 2016 is due to some combination of the mixed major sections and improvement in the course delivery format or the syllabus.

Additionally, the revised student skill RLOs in place from Fall 2015 were more accessible and student-friendly than earlier versions.

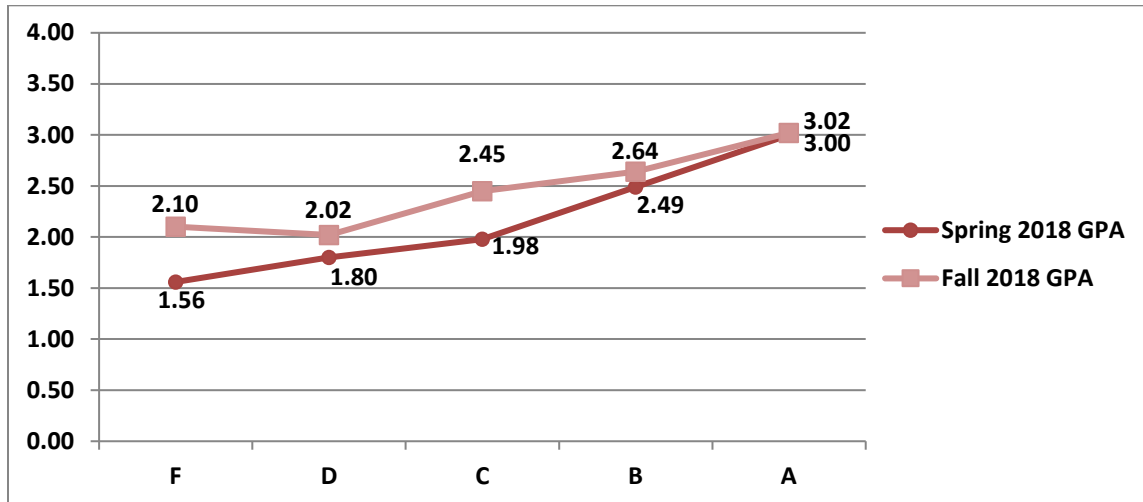
In summary, when producing the earliest reports from 2011, it was difficult to draw conclusions about the results of the surveys due to the lack of comparative data, however, there are now eight semesters worth of data. In 2014, an increase in negative results more closely aligned with 2011 and 2012 responses was observed regarding personal attitudes. Inversely, 2014 saw the highest numbers relating to academic performance. In analyzing 2015, students felt the most confident about their personal skills at the end of the semester and are less negative on feeling as though they belong to the campus community and whether they would recommend UMassD to a friend. With the 2016 cohort, negative responses more comparable to prior years are noted regarding personal attitudes although these negative responses did not reflect students' academic performance at the end of the semester, which was higher than all prior years with the exception of 2014. The year 2017, indicated the most negative responses in knowing the expectations of a successful student and recommending UMassD to a friend which aligns with the decrease in academic performance at the beginning and end of the spring semester. Academic performance and differences in personal attitude responses show noted improvement for 2018 although differences in institutional attitudes concerning whether they would choose UMassD again and whether they plan to earn their degree at UMassD resulted in more negative findings than the previous year.

#### *Fall 2017 CAS 101 Students Success in Fall 2018*

The table below shows students' academic success (i.e., GPA) in the Spring and Fall 2018 semesters based upon their grade received in CAS 101 in Fall 2017. Based on the academic performance in CAS 101, we see below that students who received a C grade range (1.700-2.300 quality points) earned an average cumulative GPA in spring 2018 of a 1.98 and a 2.45 in Fall 2018. However, students who received an A grade range (3.700-4.000 quality points) in CAS 101 in Fall 2017 earned an average cumulative spring 2018 GPA of a 3.00 and 3.02 cumulative GPA in Fall 2018.

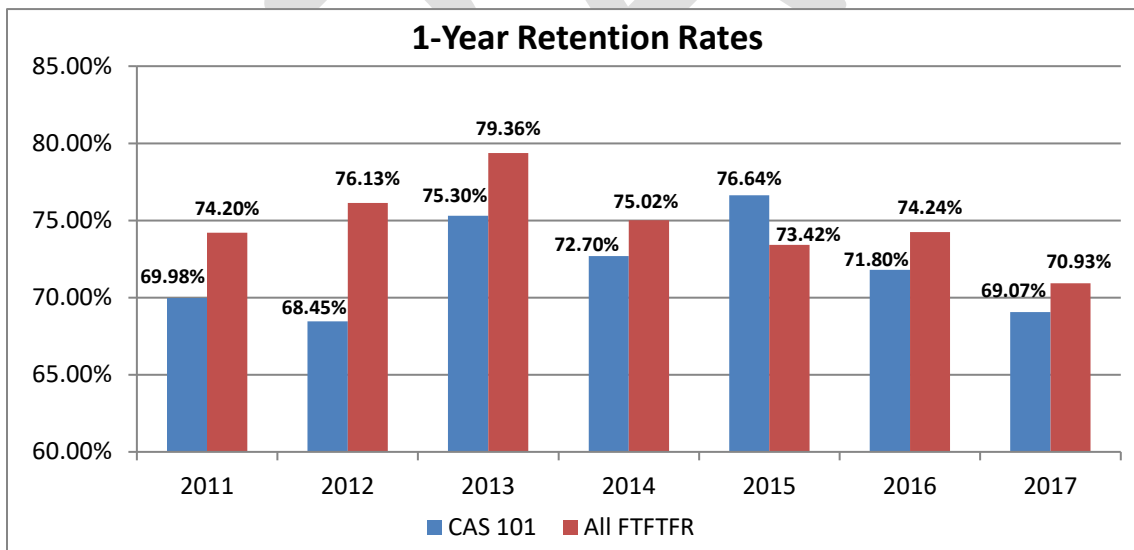
<b>Fall 2017 CAS 101 grade (quality points)</b>	<b>Spring 2018 Cum GPA</b>	<b>Fall 2018 Cum GPA</b>
F - (0.0)	1.56	2.10
D - (0.700-1.300)	1.80	2.02
C - (1.700-2.300)	1.98	2.45
B - (2.700-3.300)	2.49	2.64
A - (3.700-4.000)	3.00	3.02

CAS 101 Students Cumulative GPA Spring 2018 and Fall 2018



### Retention Rates and Graduation Rates

Looking at retention rates, data provided by the Office of Institutional Research and Assessment reveal that the first-year retention rate in the College has fluctuated over time. The chart below also indicates that the Fall 2015 cohort is the only cohort to bypass the overall university retention rate.



The four-year graduation rate for the 2014 CAS 101 cohort is 32.5% which is an increase over the 2013 cohort rate of 31.4%. The overall university four-year graduation rates are 34.3% and 37.1%, respectively. From the 2014 cohort, 27.9% of the CAS 101 students are persisting at UMassD and those students who did graduate had an average degree GPA of 3.315.

## Trends over Time in Attitudes and Performance

### *Attitudes*

In Figure 1, each question shows the average change in attitudes and performance from the beginning of the semester to the end of the semester and presents trends in assessing students' confidence in their personal skills. In 2011, students' assessment of their skills, expectations, and personal qualities were marginally negative at the end of the semester. For 2012, responses were increasingly negative compared to the previous year. By contrast, students' assessments in 2013 were notably positive (regarding skills and personal qualities) or unchanged (expectations). In 2014, assessment results were decreased when compared to 2013, but increased when measured against 2011 and 2012. Looking at 2015, students' assessments produced the most positive results out of all the eight years of survey administration. Students' assessments were marginally lower in 2016 compared to 2015, but still higher when measured to years 2011 and 2012. In 2017, student's assessments were distinctly negative compared to prior years and the most negative of all eight years in regards to knowing the expectations of a successful student. Results for the year 2018 presented a marked improvement from the previous year showing a less negative outcome regarding skills and expectations but showed a slightly increased negative assessment of personal qualities to succeed compared to 2017.

Figure 1: Differences in Personal Attitudes

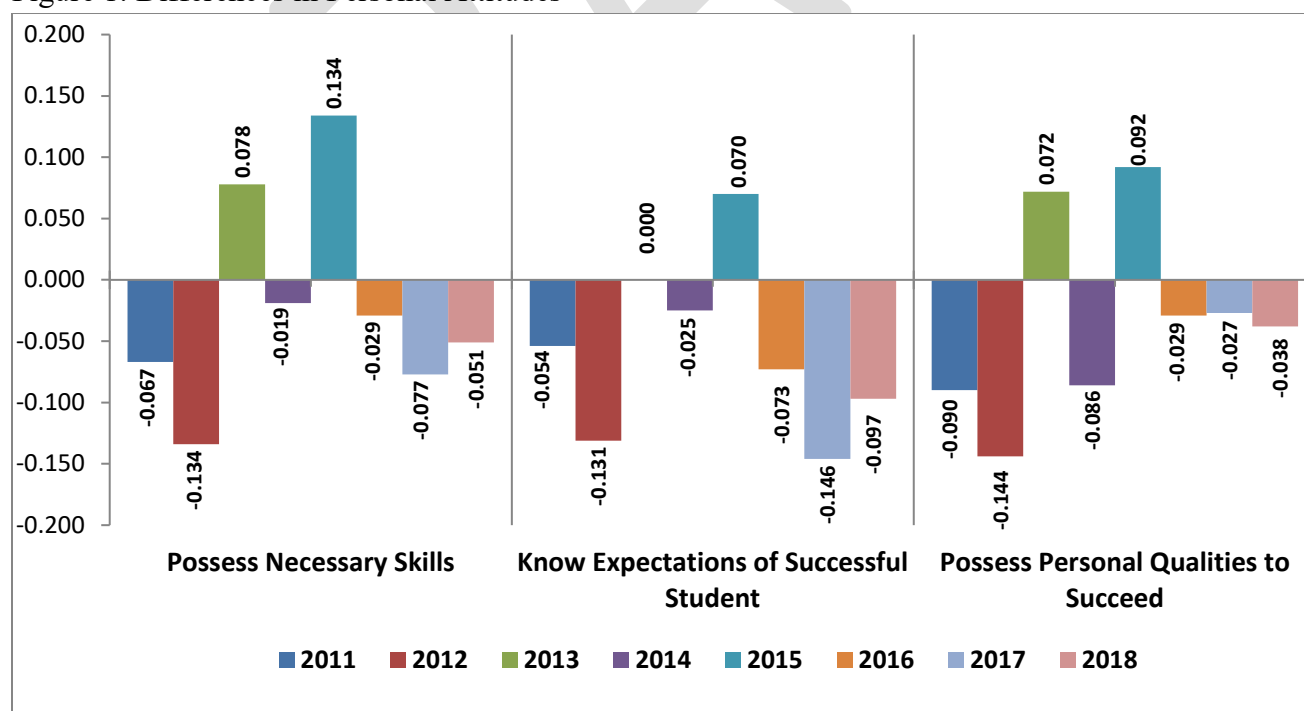
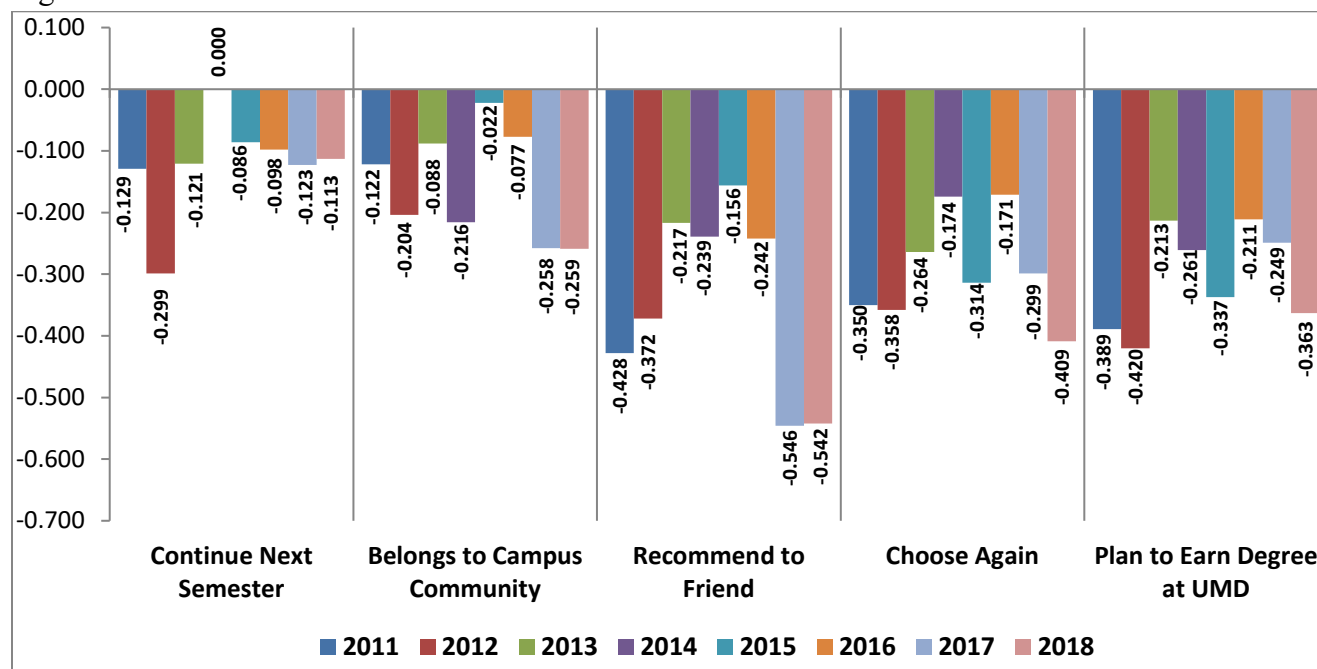


Figure 2: Differences in Institutional Attitudes



While all the indicators of institutional attitudes in Figure 2 show negative change over the eight years with the exception in 2014 where attitudes were unchanged regarding continuing to the next semester, similarities to the personal attitudes assessments are presented. The majority of student responses were most negative in 2012 and the least negative in 2016. Only the responses indicating whether they would recommend UMass Dartmouth to a friend deviate, as student responses were most negative in 2017 and 2018 respectively. The year 2018 presents the most negative response specifying whether a student plans to earn another degree at UMass Dartmouth since 2012 and the lowest percentage of all eight years on whether they would choose UMass Dartmouth again. Continuing to next semester, feeling they belong to the campus community, and if they would recommend UMass Dartmouth to a friend did not indicate any significant change in the results when compared to 2017. Not all of these differences in personal and institutional attitudes are statistically significant; the differences that were statistically significant are for the questions regarding if they see themselves belonging to the campus community, would recommend UMassD to a friend, would choose to enroll at UMassD again, and if a student plans to earn their degree at UMassD.

### *Academic Performance*

Academic performance (CAS 101 grade) steadily increased among CAS 101 students from 2011 through 2014, and these differences are statistically significant. These differences remain when controlling for the entering GPA of the students, which means that the increased academic performance is not explained by increasing quality (measured as entering HS GPA) of incoming

classes. In 2015, it is noted that the CAS 101 grade dropped compared to previous years but not as low as seen in 2011. For the same cohort it is observed that students' cumulative GPA in the beginning of spring 2015 and 2017 dropped the lowest of all the presented eight years. In 2016, there is an improvement in students' academic performance (CAS101 Grade, Cum GPA beginning of Spring semester, Cum GPA End of Spring semester) when compared to 2015. By contrast, in 2017, a slight decrease in academic performance (CAS101 Grade, Cum GPA Beginning of Spring semester, Cum GPA End of Spring semester) is noted when compared to 2016 and the Cum GPA at the Beginning of the Spring semester corresponded with the lowest academic performance seen since 2015. Performance in 2018 showed marked improvements overall (CAS101 Grade, Cum GPA Beginning of Spring semester, Cum GPA End of Spring semester) when compared to 2017.

<i>All Students</i>	Fall 2018	Fall 2017	Fall 2016	Fall 2015	Fall 2014	Fall 2013	Fall 2012	Fall 2011
CAS 101 Grade	3.23	3.12	3.26	2.90	3.56	3.04	3.04	2.57
Cum GPA Beginning of Spring semester	2.76	2.54	2.75	2.54	2.95	2.66	2.62	2.55
Cum GPA End of Spring semester	2.72	2.59	2.86	2.75	2.91	2.68	2.61	2.52

### **Fall 2018: Major-Only vs. Mixed Sections**

#### *Academic Performance*

In comparing major-only sections vs. mixed sections for 2018, students in the mixed sections have better overall academic performance (GPA) than students in the major-only sections, although major-only sections' performance fairs better in their CAS 101 grade. This holds true for all students, when excluding ASU students only, and when excluding both ASU and LAR students from the analysis.

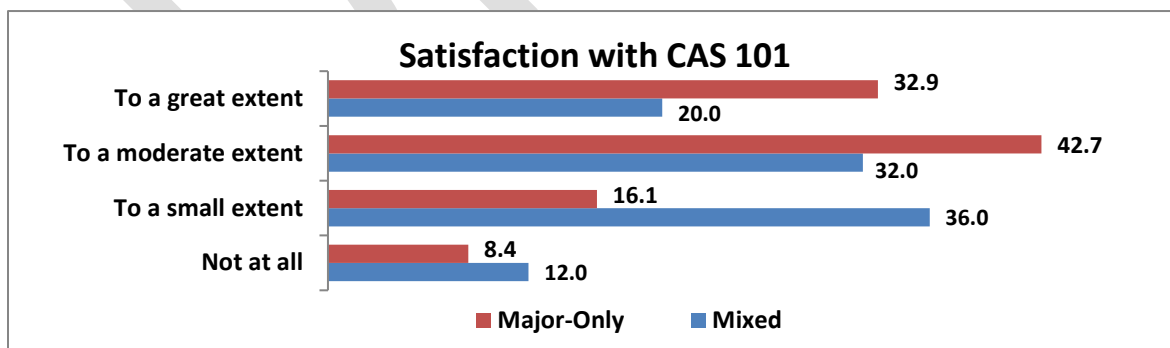
<i>All Students</i>	Major-Only (n=321)	Mixed (n=25)
CAS 101 Grade	3.25	3.08
Cum GPA Beginning of Spring semester	2.75	2.87
Cum GPA End of Spring semester	2.70	3.02
Cum Credits Beginning of Spring semester	15.8	19.2
Cum Credits End of Spring semester	27.7	33.8

<i>Excluding Admit Plans of ASU-BA</i>	Major-Only (n=207)	Mixed (n=23)
CAS 101 Grade	3.35	3.15
Cum GPA Beginning of Spring semester	2.86	2.98
Cum GPA End of Spring semester	2.83	3.10
Cum Credits Beginning of Spring semester	17.2	20.0
Cum Credits End of Spring semester	30.2	35.1
<i>Excluding Admit Plans of ASU-BA &amp; LAR-BA</i>	Major-Only (n=194)	Mixed (n=23)
CAS 101 Grade	3.48	3.15
Cum GPA Beginning of Spring semester	2.88	2.98
Cum GPA End of Spring semester	2.86	3.10
Cum Credits Beginning of Spring semester	17.4	20.0
Cum Credits End of Spring semester	30.5	35.1

### *Attitudes*

Students in major-only sections displayed statistically significant differences ( $p \leq .01$ ) on their institutional attitudes on whether they strongly agree if they plan to earn their degree from UMassD and if they would choose to enroll at UMassD again when compared to major-only and ASU-only sections (data not shown here).

Students in major-only sections were more likely to express a great deal of satisfaction to a great or moderate extent with CAS 101 as shown below. These patterns hold true for all majors even when excluding for those who are ASU or LAR. The differences in satisfaction with CAS 101 is statistically significant ( $p \leq .01$ ) when comparing major-only and mixed major sections.



Students with a declared major (i.e., excluding ASU students) in mixed sections scored higher when asked about a student's major choice. There is a statistically significant difference ( $p \leq .01$ ) between students from major-only and mixed CAS 101 sections for those major-only sections who answered they entered a major and are confident it's right for them. Students in mixed

major sections revealed higher results when asked about major choice, major requirements, career goals, and connections to students and faculty in their major.

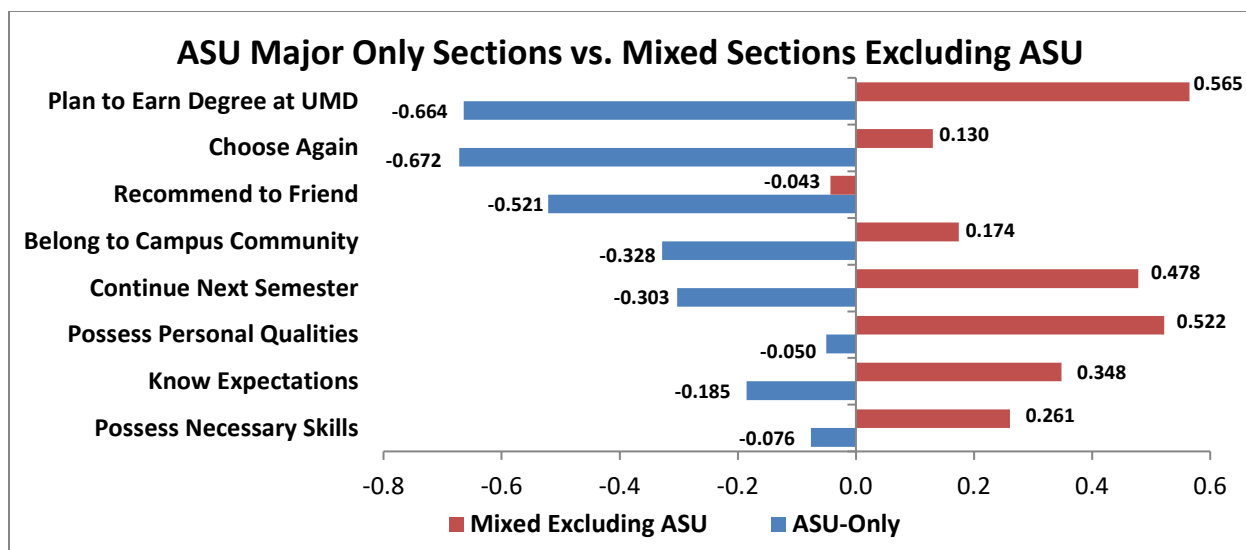
	<b>Major-Only (n=220)</b>	<b>Mixed (n=23)</b>
<b><i>Major Choice</i></b>		
I entered with a major and am confident this is right for me.	60.5	65.2
I entered with a major and am not confident it is right for me.	33.6	34.8
<b><i>Major Requirements</i></b>		
I understand which courses I need to take to fulfill requirements.	85.7	95.7
I do not understand which courses are required of me.	12.0	4.3
<b><i>Career Goals</i></b>		
I understand how my academic work will help me fulfill career goals.	75.0	87.0
It is not clear to me how my academic work is related to my career goals.	11.4	4.3
<b><i>Major Connection</i></b>		
Highly Connected	16.4	30.4
Somewhat Connected	65.5	65.2
Not very connected	18.2	4.3

\*excluded ASU students from these numbers, but LAR is included

### *ASU Students*

In looking at ASU major only sections compared to mixed-major sections excluding ASU students, the results for ASU students showed notable negative assessments across all questions contrasting with the results for the sections with mixed majors. There are a small number of ASU students who responded to the surveys, however, the difference in responses to whether ASU students plan to earn their degree from UMass Dartmouth is statistically significant ( $p \leq .05$ ).





Students who started as ASU and who were enrolled in ASU-only sections were less likely to say they are confident they entered with the right major than students enrolled in mixed sections excluding ASU (13.4% versus 65.2% in mixed sections).

Finally, students in mixed sections while excluding ASU students fare better on measures of academic performance (i.e., CAS 101 grade, Cum GPA Beginning of Spring semester, Cum GPA End of Spring semester, and Cum Credits Beginning of Spring semester) when compared to ASU students in ASU only sections, although none of these differences are statistically significant.

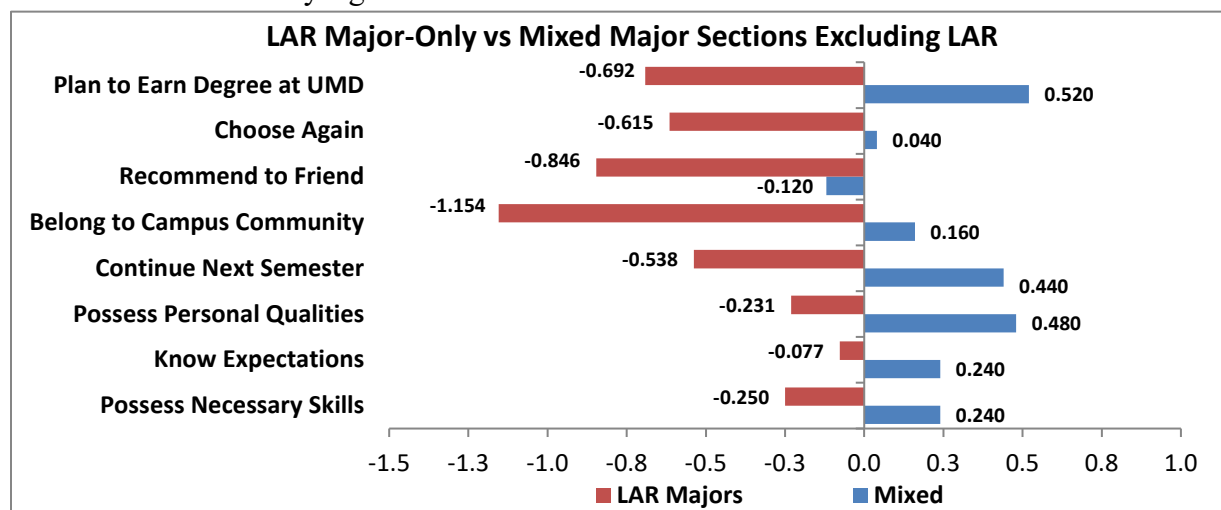
<i>ASU Students</i>	ASU-Only (n=119)	Mixed Excluding ASU (n=23)
CAS 101 Grade	3.03	3.15
Cum GPA Beginning of Spring semester	2.55	2.98
Cum GPA End of Spring semester	2.41	3.11
Cum Credits Beginning of Spring semester	12.8	20.0
Cum Credits End of Spring semester	22.2	35.1

Overall, there does not appear to be a preponderance of evidence favoring or disfavoring enrolling ASU students in ASU-only sections which has held true to the 2013 year's CAS 101 analysis.

#### *LAR Students*

The LAR major-only students' results indicate elevated negative responses compared to mixed major sections across all questions. LAR students displayed the least negative attitudes on knowing what is expected to be a successful student and on possessing personal qualities necessary to be a successful student at UMass Dartmouth. There were a small number of LAR

students who responded to the surveys, although none of the differences in responses were shown to be statistically significant.

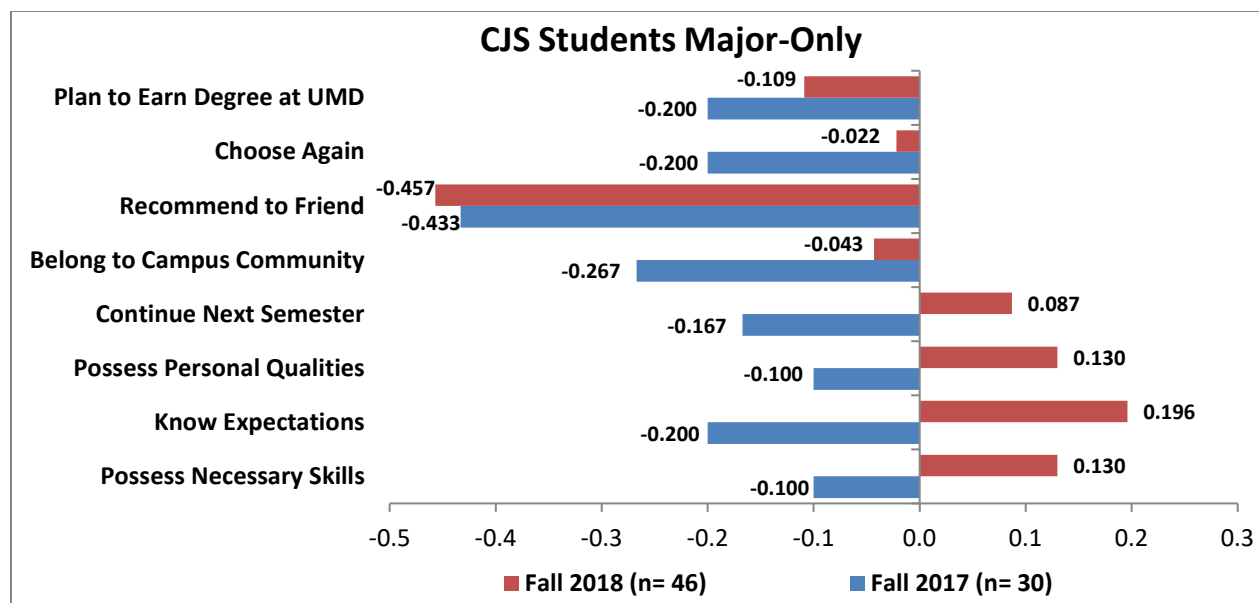


LAR students did not fare better on measures of academic performance (i.e., CAS 101 Grade, Cum GPA Beginning of Spring semester, Cum GPA End of Spring semester, Cum Credits Beginning of Spring semester, and Cum Credits End of Spring semester), than students in mixed-major sections while excluding LAR majors perform, although none of these differences are statistically significant.

	LAR Majors (n=13)	Mixed Excluding LAR (n=25)
CAS 101 Grade	2.90	3.08
Cum GPA Beginning of Spring semester	2.53	2.87
Cum GPA End of Spring semester	2.48	3.02
Cum Credits Beginning of Spring semester	13.3	19.2
Cum Credits End of Spring semester	25.0	33.8

### *Crime and Justice Studies Majors*

Crime and Justice Studies (CJS) is one of the department majors to have run multiple major-only sections of CAS 101 in Fall 2017 and Fall 2018. Because of this, analysis of CJS majors can help isolate whether the improved attitudinal effects in Fall 2018 are due to the major-only format or the changing structure and nature of the CAS 101 course, as the former is consistent across these two sections. If there is no difference in the response of CJS majors across these two years, this suggests the major-only format is driving attitudinal change. If the attitudinal change of CJS majors across these two years is similar to their counterparts in other majors, this suggests the course format is more important.



The results above suggest there are significant differences between the two years involving all questions with the exception of whether they would recommend UMass Dartmouth to a friend which was calculated with the most negative responses and was slightly more negative than Fall 2017 results. Fall 2018 Crime and Justice Studies majors also had negative opinions about planning to earn their degree at UMassD, if they would choose UMassD again, and belonging to the campus community. Unlike the previous year, continuing to next semester, possessing the personal qualities of a successful student, knowing expectations, and possessing the necessary skills to be a successful student at UMassD contrasted to the Fall 2017 responses by presenting all positive outcomes.

When comparing the overall academic performance for Crime and Justice Studies CAS 101 students in the table below, Fall 2018 shows a notable improvement resulting in the highest means of all previously recorded years for CAS 101 grade, Cum GPA for the Beginning and Cum GPA for the End of spring semester. Cum Credits Beginning and End of Spring semester were slightly lower for Fall 2018 when compared to the CJS CAS 101 students from Fall 2017 and Fall 2016. However, Crime and Justice Studies majors performance improved when compared to Fall 2015 in Cum Credits at the Beginning and End of Spring semester.

<i>Crime and Justice Studies</i>	Fall 2018 (n=44)	Fall 2017 (n=57)	Fall 2016 (n=18)	Fall 2015 (n=72)
CAS 101 Grade	3.65	2.94	3.20	2.60
Cum GPA Beginning of Spring semester	2.87	2.25	2.60	2.35

Cum GPA End of Spring semester	2.96	2.43	2.63	2.70
Cum Credits Beginning of Spring semester	16.2	17.7	22.2	15.5
Cum Credits End of Spring semester	30.2	30.5	32.2	28.8

When assessing three years' worth of trend data on Crime and Justice Studies major-only sections, attitudes related to if they plan to earn their degree from UMassD, and if they would choose UMass Dartmouth again, have progressively become less negative in Fall 2018 when compared to Fall 2017 and Fall 2016. In Fall 2018 CJS major-only sections attitudes have become more negative in regards to if they would recommend UMassD to a friend when compared to the previous two years. There were marked improvements in attitudes in Fall 2018 compared to Fall 2017 relating to whether they feel they belong to the campus community. Notable positive attitudes regarding continuing next semester, possessing personal qualities, knowing expectations, and possessing necessary skills emerged in Fall 2018 when compared to the previous year.

