

ASSOCIATE OF SCIENCE PROGRAM REVIEW
FALL 2015 - SPRING 2020
WESTERN NEVADA COLLEGE

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1. Introductions

a. Description and Summary of the Associate of Science degree

The Associate of Science degree is designed for students who intend to transfer with junior status to a four-year college or university for a bachelor of science degree. This degree allows early choices for those planning a professional career in mathematics, science, engineering, technology, medicine, agriculture or related fields.

Students can complete an Associate of Science degree in four semesters taking classes either at the same campus or multiple campuses of WNC. Classes are scheduled in a way that fits the needs of traditional and nontraditional students. There are different possible pathways to complete an AS degree. At WNC, Liberal Arts Division takes responsibility for oversight of the AS Program.

b. College and Program Goals and Learning Outcomes

WNC core themes:

- Transfer education
- Professional education
- Lifelong learning

College Core Themes, Objectives, and/or Key Performance Indicators	Program Goals and Student Learning Outcomes
<ul style="list-style-type: none"> ● WNC provides access to educational pathways and opportunities ● WNC students make an efficient transition from preparatory to college level coursework ● WNC provides equitable access for students regionally and demographically ● WNC supports student learning, progress, and completion ● WNC advances student achievement of learning outcomes at course, program, and institutional levels ● WNC builds student engagement with education and the WNC community 	<p>The successful student will:</p> <ul style="list-style-type: none"> ● Meet the institutional student learning outcomes (1-6). ● Demonstrate the ability to identify the fundamental tenets of scientific inquiry. ● Present accurate calculations and symbolic operations, and explain how such calculations and operations are used in the sciences, mathematics or engineering. ● Use critical thinking and creativity to select and apply recognized experimental or observational techniques suitable for examining contemporary or enduring problems in the sciences.

<ul style="list-style-type: none"> • WNC identifies and closes achievement gaps across student populations by supporting achievement across demographic groups in traditional and non-traditional fields • WNC sustains a learning environment that promotes equity and inclusion • WNC responds to the needs of industry and provides effective pathways for students toward in-demand occupations • WNC contributes to solutions to critical issues facing 21st century Nevada 	<ul style="list-style-type: none"> • Be prepared to succeed at a transfer institution.
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c. College and Program Mission Statements

College Mission	Associate of Science Program Mission
WNC contributes to solutions for the 21st century by providing effective educational pathways for the students and communities of Nevada.	The mission of AS program is to provide the academic knowledge and skills for successful transfer to meet higher education goals.

d. Degrees and/or Certificates offered in the Associate of Science degree

The Associate of Science Program at WNC offers an Associate of Science degree.

e. Niches served in the Associate of Science degree

An Associate of Science degree provides a pathway for students to different educational and professional goals such as,

- Transfer to a four-year college or university for a bachelor of science degree

- Fulfill the requirements of prerequisites for nursing and other health science program
- f. **Overview of the Associate of Science Degree Program Review**

Unique Characteristics

An Associate of Science degree is designed for students who intend to transfer with junior status to a four-year college or university for a bachelor of science degree. An Associate of Science degree provides a pathway for students to different educational and professional goals in Science, Math, Engineering or related fields. Students can complete an associate of science degree in four semesters by taking classes either online or multiple campuses.

Concerns or trends affecting the program

- Many faculty were not aware of the existence of Program level Student Learning Outcome (PSLOs). PSLOs have rarely been assessed. Only selective ISLOs have been regularly assessed in Science, Math, and Engineering courses. Faculty need more training on assessment and reporting.
- Although classes are scheduled to fit the needs of traditional and nontraditional students in AS program, there have been issues with successful scheduling of enough biology course sections due to inability to find enough faculty to cover those sections. There is a growing demand for these courses due to prerequisites in the healthcare field. Another issue related to scheduling is trying to schedule higher level courses in balance with the lab science course schedules.
- Math 181, which is a required course in the AS Program at WNC, is a bottleneck course. Some of the Bachelors degrees offered at UNR do not need Math 181.
- With over 50% of students dropping out of the program each year, most students did not continue with their WNC education. Comparing retention rates with graduation rates, very low percentages of students graduated with an AS degree. However there was a slightly upward trend in the following year. This was excluding Jump Start students.
- Across demographics, there were gaps in success for completion of an AS degree. Particularly, female graduates were behind male graduation numbers although they made up the majority of enrollment. This gap was also seen in the growing enrollment with Hispanics; yet, their graduation numbers remained stagnant. There were also sharp increases over the past five years of students who were seeking DSS accommodations.
- Enrollments across course modalities (e.g. in person, online, etc) shifted significantly over the past five years - going from mostly in person to now only online enrollment as taking the lead.

- Increase in enrollments in Hispanic population and decrease in White population. Also, a gap has been noticed in completion rate for degrees between Hispanic and White populations, which are the two major ethnicities served by WNC.
- Increase in degree completion rate in Jump Start students and decrease in Non-Jump Start students.
- Decrease in degree completion rate in Pell Grant recipients versus non-Pell grant recipients.
- There is a large gap in the success rate between the students enrolled in Latino Cohort and their graduation rate.
- Increase in demand for online modalities of class based on student enrollment.

Significant changes or needs in the next five years

- Address Math 181 Requirement.
- Improve online offerings.
- PSLO assessment training and reporting.
- Modify PSLOs.
- Close Hispanic student degree completion gap.
- Monitor DSS trends.
- OER support.
- Monitor academic dishonesty.

2. Alignment and Assessment

a. History of Program level assessment

Institutional Student Learning Outcomes (ISLOs)

Upon completing a degree at WNC, students must demonstrate:

1. **WORKING KNOWLEDGE**– Identify, describe, and apply information, theories, methodologies and approaches from the sciences, social sciences, and humanities/arts.
2. **WRITTEN COMMUNICATION** – Write effective projects, papers, and reports.
3. **QUANTITATIVE LITERACY** – Present accurate calculations and symbolic operations, and explain how such calculations and operations are used in either the specific field of study or in interpreting information in other fields.
4. **INFORMATION LITERACY** – Locate, evaluate, and appropriately use information from multiple resources to complete projects, activities, and papers.
5. **DIVERSITY AND SOCIETY** – Describe diverse historical and/or contemporary positions on selected democratic values or practices.
6. **CRITICAL THINKING** – Integrate knowledge and skills from the study of sciences, mathematics, social sciences, and the humanities/arts to think critically about and develop solutions to contemporary and/or enduring problems.
7. **CAREER PREPARATION** – Identify, describe, and apply information in the discipline or career area of their choice sufficient for further study and/ or demonstrate competencies required to succeed in the workplace.

Associate of Science Degree Program Student Learning Outcomes (PSLOs)

The successful student will:

- Meet the institutional student learning outcomes (1-6)
- Demonstrate the ability to identify the fundamental tenets of scientific inquiry.
- Present accurate calculations and symbolic operations, and explain how such calculations and operations are used in the sciences, mathematics or engineering.
- Use critical thinking and creativity to select and apply recognized experimental or observational techniques suitable for examining contemporary or enduring problems in the sciences.
- Be prepared to succeed at a transfer institution.

Program level student learning outcomes (PSLOs) were never assessed in the past in AS degree program. Many instructors were not aware of the existence of PSLOs. Although, there have been some ongoing efforts to help the faculty with assessment. Since some of the ISLOs

more or less overlap with PSLOs, we can say that certain PSLOs were assessed. Table 1 below shows the overlapping PSLOs that have been assessed in the program.

b. Instructors feedback on Program Level Student Learning Outcomes (PSLOs)

We have included a compiled feedback from STEM faculty

- *What Institutional Student Learning Outcomes (ISLOs) do STEM instructors assess for in their courses? Including chemistry, geology, geography, biology, math, chemistry, statistics, physics.*

Most of the STEM instructors assess for ISLO #1. ISLO #3 and 6 are assessed commonly in Math and Statistics. These ISLOs are also assessed in Biology 100 and Chemistry 121 occasionally. ISLO #2 is assessed in Environmental Science 101. ISLO #4 can be assessed in biology lab courses. Nonetheless, it has not been assessed yet. All the biology faculty can get together and come up with the plan to assess this ISLO.

- *Which of the Program SLOs (PSLOs) (outside of the ISLOs) do not align with your course objectives? Which courses and PSLOs?*

There were mixed responses from the instructors. Several of them reported redundancies between the ISLOs and PSLOs and expressed that there should not be overlap between them. However, some of the instructors think that there should be overlap between the two so that alignment is clear. Either way, the PSLOs align more or less to ISLOs #3, #4, and #6. Out of these, ISLOs #4 and #6 are barely assessed in the STEM courses. However, these ISLOs are assessed in other courses, which are required for an AS degree. In addition, PSLOs are a concentration of skills from the ISLOs that AS degree students should particularly develop. PSLOs have never been assessed in the AS program.

- *How could the ISLOs and PSLOs be changed to improve alignment with your course objectives?*

Many faculty didn't realize we had PSLOs in place. Some suggested expanding their course objectives to include more of the ISLOs, such as more writing to assess ISLO #2 or critical thinking activities to assess ISLO #6. In general, faculty preferred adding ISLOs if they already aligned with assessments they were doing in their courses.

Which of the AS degree SLOs do you think need more clarification or rewording to make it easier to read by a non-specialist? Could the course level SLOs (in your respective fields) be better adapted to meet the institutional level SLOs and how?

There are some recommendations from faculty to modify wording in the PSLOs, which are listed below.

- PSLO#2 - Original: Demonstrate the ability to identify the fundamental tenets of scientific inquiry.

Modify to: Demonstrate the ability to **explore, observe, and experiment with** the fundamental tenets of scientific inquiry.

- PSLO#3 - Original: Present accurate calculations and symbolic operations, and explain how such calculations and operations are used in the sciences, mathematics or engineering.

Modify to: **Perform** accurate calculations and symbolic operations, and explain how such calculations and operations are used in the sciences, mathematics or engineering.

- PSLO#4 - Original: Use critical thinking and creativity to select and apply recognized experimental or observational techniques suitable for examining contemporary or enduring problems in the sciences.

Modify to: **Use critical thinking and explore selecting and applying** recognized experimental or observational techniques suitable for examining contemporary or enduring problems in the sciences.

- Does the language used in the course level SLOs make it clear to the instructors what needs to be assessed, or is the language too vague? How could we change the language to better communicate to instructors what the SLO is assessing (at the course level)?

There is a general confusion over the goals of the PSLOs. Should they overlap with the ISLOs? Or should a subset be used to point students toward specific goals of the AS degree? Or should there be unique SLOs for the program? Most of the faculty didn't know that there were program-level SLOs. In addition, many faculty are not clear on the overall assessment process. More training on assessment needs to be provided to the faculty.

Please refer to the AS Review in Canvas for the assessment report data.

c. Mapping course-level outcomes with program-level outcomes

Currently ISLO #3 overlaps with PSLO #3 and ISLO #6 some what overlaps with PSLO #4. PSLOs have never been assessed in the AS program. However, since some of the PSLOs overlap with ISLOs, they are automatically assessed while assessing those overlapping ISLOs.

3. Effective Educational Pathways

a. Evidence of effectiveness

i. AS Course Sequence

Associate of Science Course Sequence

1st Semester (16 credits) <ul style="list-style-type: none">• ENG 100 or 101• HIST 101• EPY 150• MATH 181• Fine Arts	2nd Semester (13-16 credits) <ul style="list-style-type: none">• ENG 102• U.S./NV Constitution• MATH 182 or STAT 152• Science (Group A)	3rd and 4th Semester <ul style="list-style-type: none">• Courses from Group A & B (Science) and Math that meet requirements for the major at intended transfer school
Group A (Science) <ul style="list-style-type: none">• Anthropology: 102 & 110L• Biology: 190, 191, 251• Chemistry: 121, 122• Geology: 101, 102, 103• Geography: 103 & 104, or 121• Physics: 151, 152, 180 & 180L, 181 & 181L, 182 & 182L	Group B (Science) <ul style="list-style-type: none">• Astronomy: 109, 110, 120• Atmospheric Sciences: 117• Biology: 200, 223, 224• Chemistry: 220• Computer Engineering: 201• Computer Science: 135, 202• Engineering Science: 100• Environmental studies: 100, 101• Geology: 105, 201• Mechanical Engineering: 241, 242	Math <ul style="list-style-type: none">• Mathematics: 126, 127, 128, 176, 181, 182, 283, 285, 330• Statistics: 152

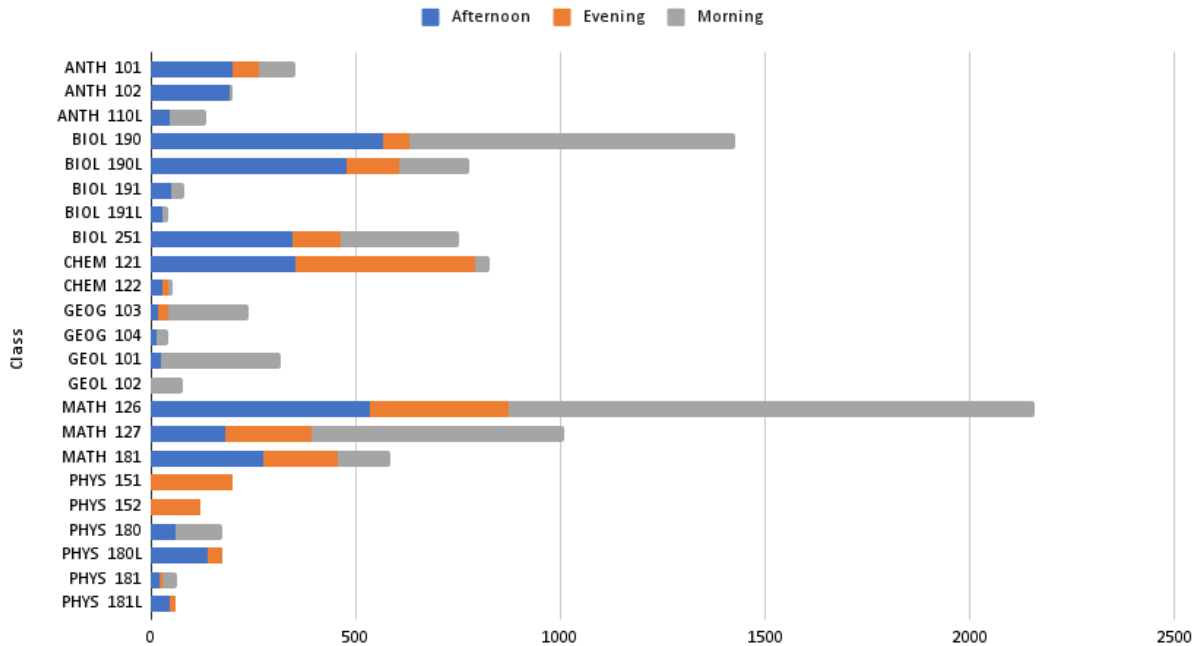
ii. Course scheduling/Enrollment history Report

Included in the supplemental material section found in AS Review Canvas.

iii. History of Course Offerings by Time of Day

Below are the in-person enrollment numbers of AS majors by the course time of day between Fall 2016 and Spring of 2020.

In-Person Courses Offerings by Time of Day (Fa '16 - Sp '20)



As can be seen, there is a variety of times offered in courses with the highest enrollment. No trends by year were observed in the data.

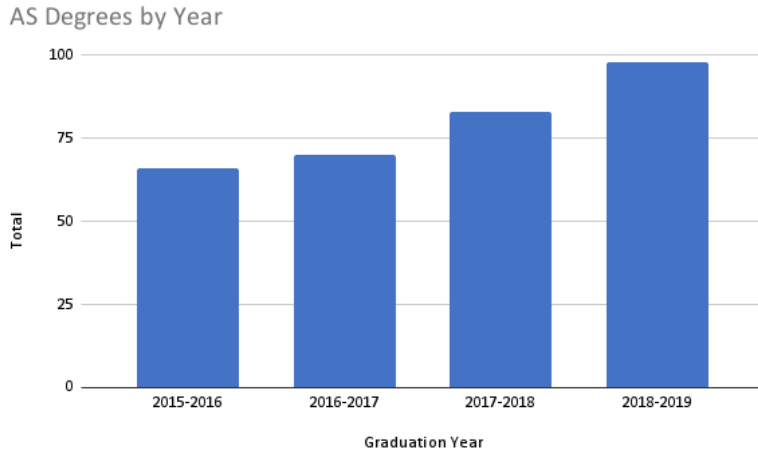
Source: "Class Scheduling History Fall 2016 to Fall 2020", WNC IRE.

iv. Graduation numbers and time of completion

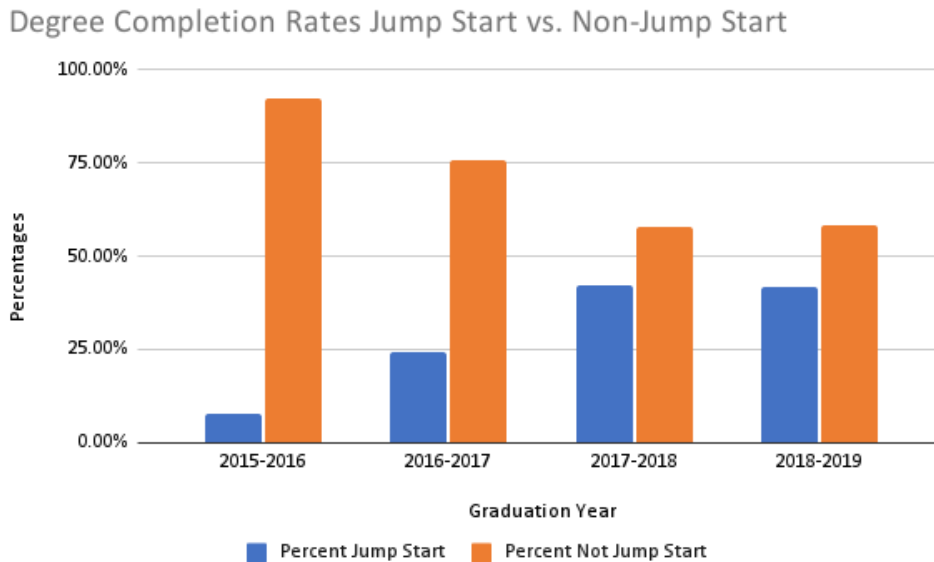
In this section, we look at how many students receive AS degrees and how fast they get them. We also consider how neglecting to distinguish between Jump Start and the general student population could lead to different narratives of success.

How many AS degrees are awarded each year?

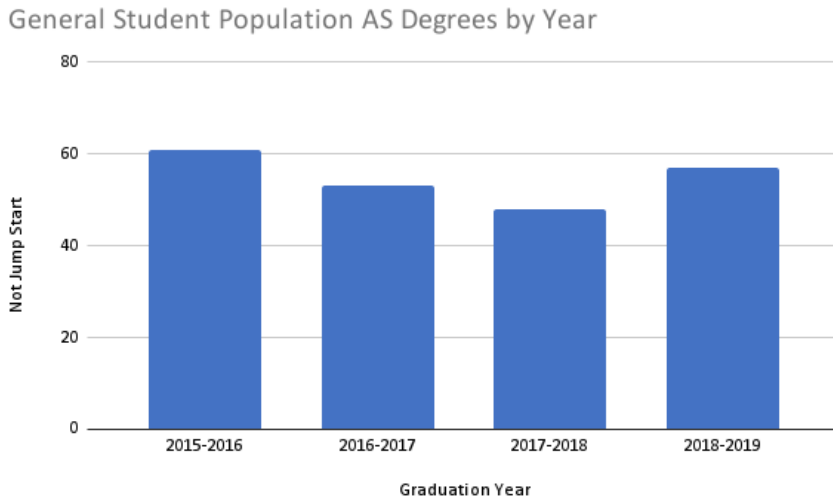
The following chart shows the number of AS degrees awarded by year.



The number of AS graduates between 2015-16 until 2018-19 are 66, 70, 83, and 98. The major reason for this increase is due to the success of the Jump Start program where the percentage of AS graduates has been on a steady increase. The following graph shows the percent of Jump Start degrees versus the percent of the general student population.



The following graph shows only the AS degrees awarded to the general student population.

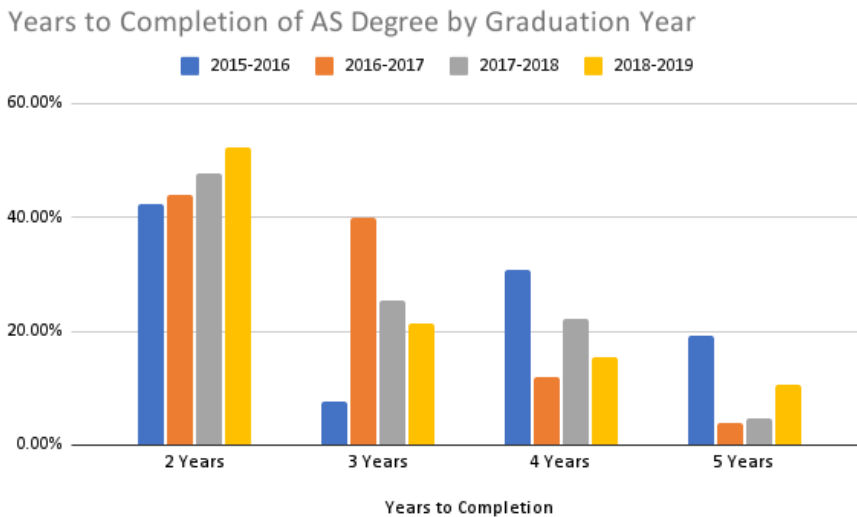


We see the numbers hovering around 48 graduates in 2017-18 to 61 graduates in 2015-2016. In 2018-19, the number was at 57.

Source: "AS Grads with UNR Data Fall 2011 to Summer 2019." WNC IRE.

Do students complete their AS degree in a reasonable time period?

Below is a graph illustrating these trends.

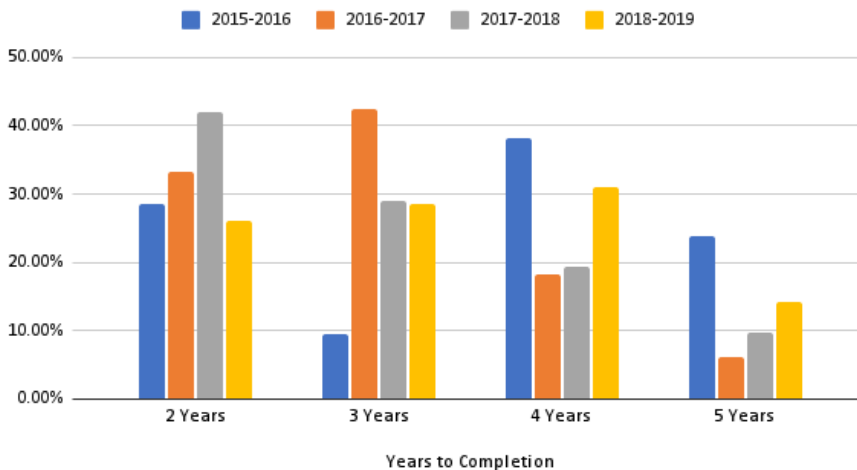


With each subsequent year starting in 2015-16 until 2018-19, the percentage of students earning their AS degree in 2 years went up from 42.31% to 52.38%. Of the total of students who

graduated in 2018-19 with an AS degree, 73.81% graduated within 3 years. This can be compared to 2015-16 graduates, where only 50% of graduates completed their degrees within 3 years. Again this trend is largely due to the increase in the number of graduates who are Jump Start students.

The following graph shows the same information but only for the general student population.

Years to Completion of AS Degree by Graduation Year (Gen Pop)



By only considering the general student population, we still see the majority of students finishing within three years 2016-17, 2017-18, 2018-19. However, the overall trend in a higher percentage of students graduating within three years vanishes if one only considers the general student population.

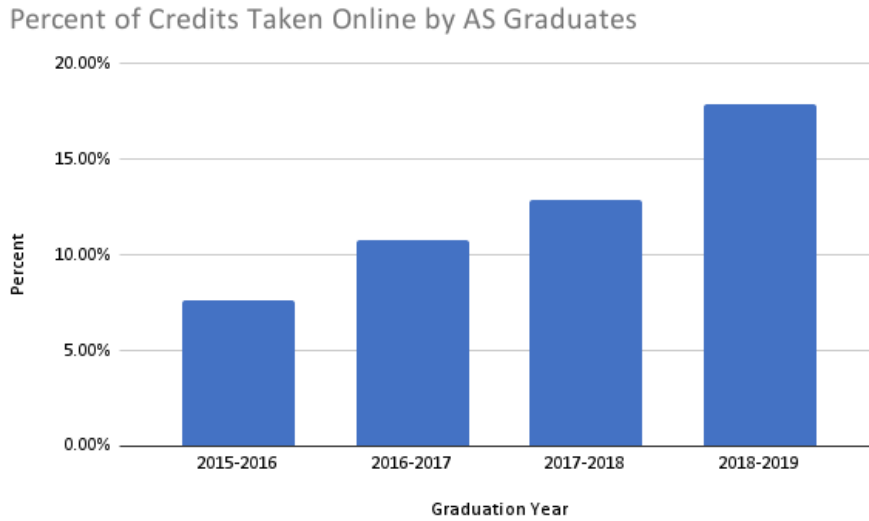
Source: "AS Grads with UNR Data Fall 2011 to Summer 2019". Retrieved from UNR Office of Institutional Analysis via WNC IRE. Sep 20, 2020.

v. Online enrollment trends

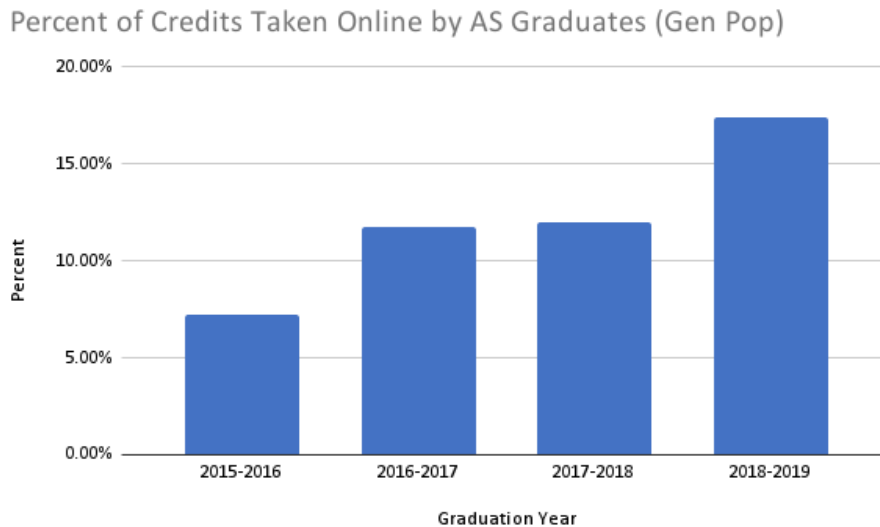
How many credits are AS graduates taking online?

Between 2015-16 until 2018-19, a total of 21,273 credits were taken by AS graduates. Of these, 2708 were taken online, accounting for 12.73% of all credits taken. Of the total AS graduates, 289 students took at least one online class. The average number of online credits taken by students who took at least one class averages to 9.37 credits per student (2708 total online credits).

Below is a graph of the percent of online credits taken by AS graduates by graduation year.



Since the exclusion of Jump Start students has been seen to change the narratives, we've looked at the same data for just the general student population. Below is the same data but excluding AS graduates who were Jump Start students.



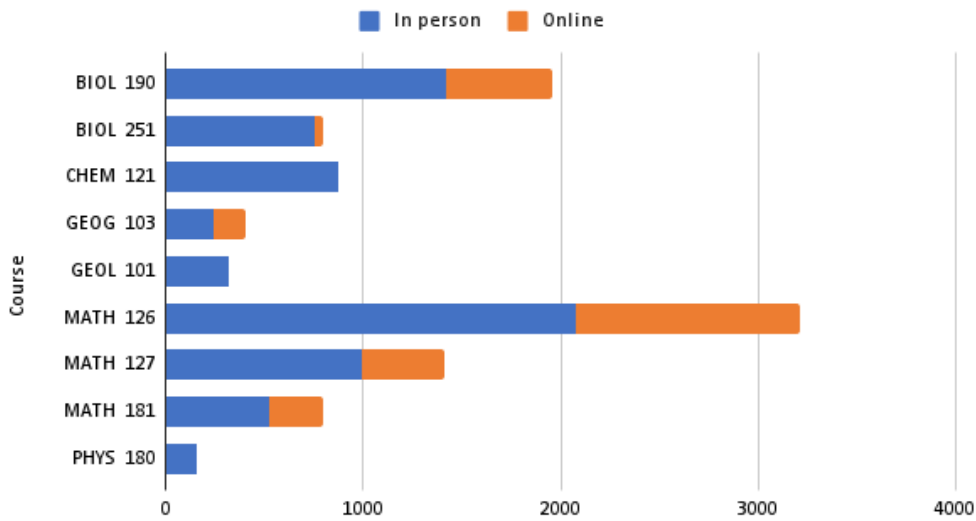
Even with the exclusion of Jump Start students, we see the same upward trend.

Source: "AS Grads with UNR Data Fall 2011 to Summer 2019", WNC IRE.

In what courses are we seeing the biggest gains in online enrollment?

Below is a graph illustrating the enrollment totals of AS graduates by instructional mode.

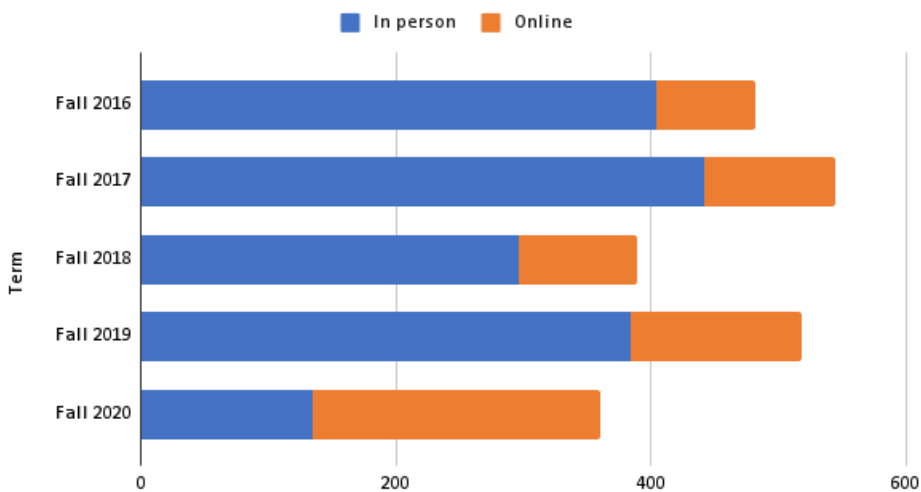
Enrollment Totals (Fa '16-Sp '20) by Mode



* Note that while some courses are listed as "online", some may be more appropriately be labelled as "hybrid", where the lectures may be online but the lab would be in person (e.g., BIOL 190).

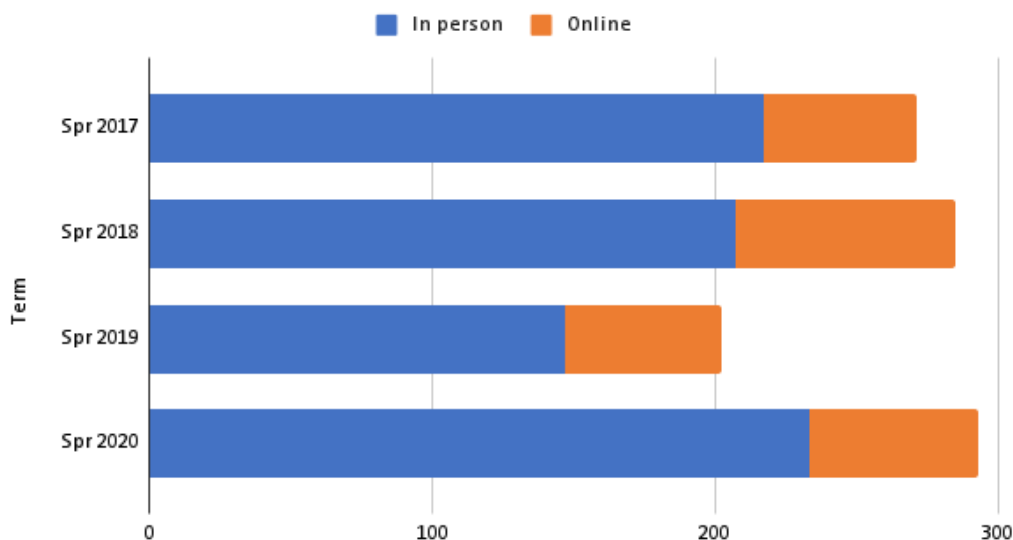
Of the above courses, we also looked at any trends in enrollment in the courses with the highest enrollment. Below are the trends for Math 126 (Precalculus I).

Math 126: Trends in Enrollment by Mode



However, this trend is not seen in the subsequent course of Math 127.

Math 127: Trends in Enrollment by Mode



Source: "AS Grads with UNR Data Fall 2011 to Summer 2019", WNC IRE.

Are students able to complete their AS degree in two years without scheduling conflicts?

Yes.

Have there been any challenges with arranging schedules to make that possible (i.e. working with faculty, finding enough faculty to teach the courses, etc)?

Yes. Common issues involve successfully scheduling enough biology course sections to meet the demands of enrollment due to inability to find enough faculty to cover those sections. There is a bottleneck in biology lab courses. Growing demands for these courses due to healthcare field demands with not enough staff to cover the biology and chemistry courses. Another issue is seen with trying to schedule higher level math courses in balance with the lab science course schedules. With Calculus II, for example, is only offered once per semester and trying to fit it into the schedule without lab science conflicts is difficult. One possible solution has been to offer more online higher math offerings, but that might not suit all students.

What is the percentage of online and hybrid offerings across the AS degree?

In Group A of the AS degree requirements ("Lab sciences"), there are only two classes that are offered 100% online - both lecture and lab. That means only one to two sections are offered *total* per year that are 100% online and meet the Group A requirement. Students have been

able to complete the degree 100% online according to the WNC Institutional Research records found in the Dashboard.

What scheduling changes are still needed for the ability for students to complete an AS degree "online" (or mostly online/hybrid, like how we have online lectures and in-person labs)?

A recommendation is to add another 100% online Group A science offering since the current only pathway online is through geography.

What are the general trends of enrollments across morning, afternoon and nighttime classes in STEM courses?

Scheduling data shows that morning sections are the most popular. Afternoon sections are relatively consistent, but evening sections are showing decline in enrollments. Since increasing the number of sections are being offered online, however, this has an impact on the numbers for in-person classes and creates a confounding variable.

For some courses - like the biology courses - that fill at least 85% of the capacity, it is difficult to differentiate preference for offerings at certain times of day.

Were surveys ever sent out to students about preferences for whether they want to take classes online or in-person across different times of day?

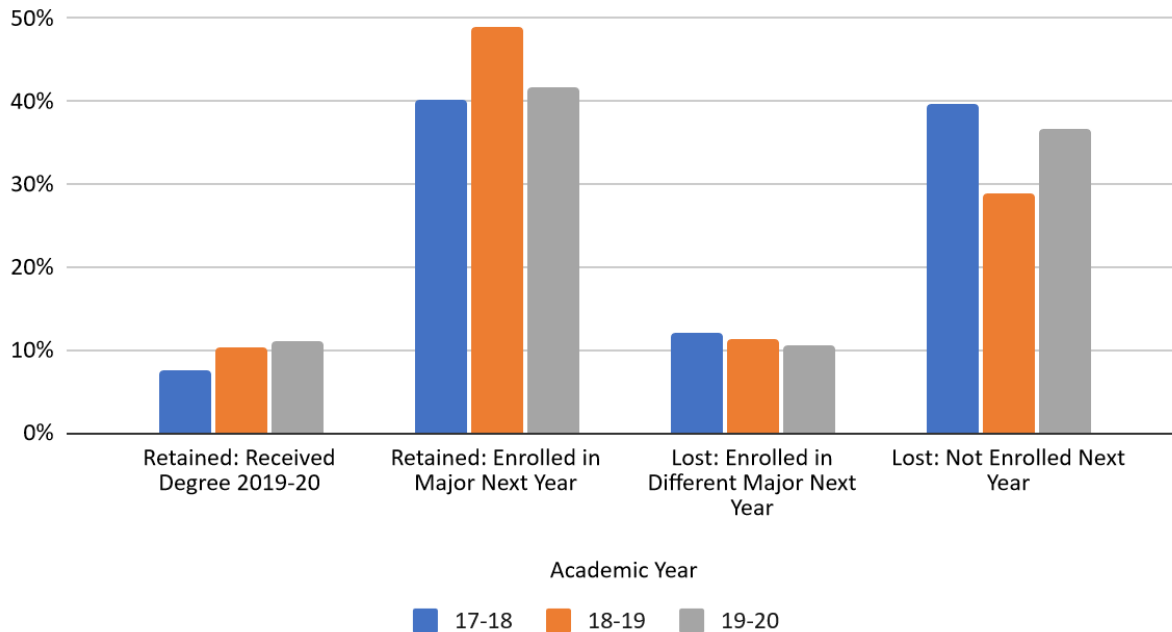
Institution-wide surveys are not sent out, but there are small surveys throughout various groups to gauge interest. This remains exclusive for high level sequence courses that will retain the same students (such as for Physics 181 or language courses). Some cohorts are also surveyed including the high school graduates in the Nevada Promise program and Latino Leadership Academy.

Scheduling for modality and time is currently based on historical enrollment trends and information regarding upcoming changes to degree requirements at 4-yr schools, transferability, etc. Historical data from the most recent one, two, or three semesters tends to be the most useful for planning the next semester. It has been suggested to send out a student modality and time survey, however it would need to occur regularly (minimum once per semester), and gather info on that students' academic path and progress may be. The timing would be a challenge. In order to apply broad student feedback to the upcoming Fall semester, students would need to be surveyed in November or December of the previous year whilst they are in the enrollment period for the upcoming Spring semester. In order to apply broad student feedback to an upcoming Spring semester, students would need to be surveyed around July or August prior to starting their Fall semester.

vi. Retention Rates

To determine retention in the AS degree, data examining how many students continued in the degree, graduated, or dropped out were compiled. This is to determine whether students transferred out of the program due to changing majors or did not return to WNC. These data do not include Jump Start or high school dual enrollment students.

Retention Detail: AS Degree (non high-school students)

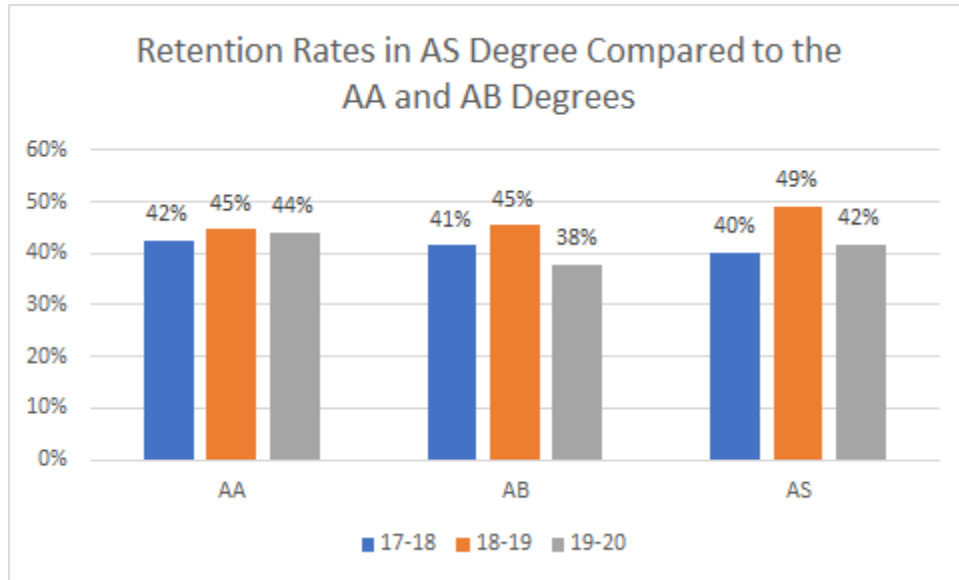


According to this data, 40% of students between 2017-2018 continued with the AS degree into the next year. That jumped up to 49% in the 2018-2019 academic year. However, the retention dropped again to 41% in 2019-2020. With over 50% of students dropping out of the program each year, most students did not continue with their WNC education (dropped out) - from 40% in 2017-2018, dropping to 29% in 2018-2019, and then 38% in 2019-2020. Some percentage of students choose a different major - consistently about 10% - but with a slight downward trend. However, this could be correlated with the slight upward trend in graduation rates for the AS degree - from 8% to 11% between 2017-2020.

Based on this data, we can conclude that most students do not continue with the AS degree into their next year (less than half). About 10% are graduating every year, but the rest are dropping out of their WNC education entirely.

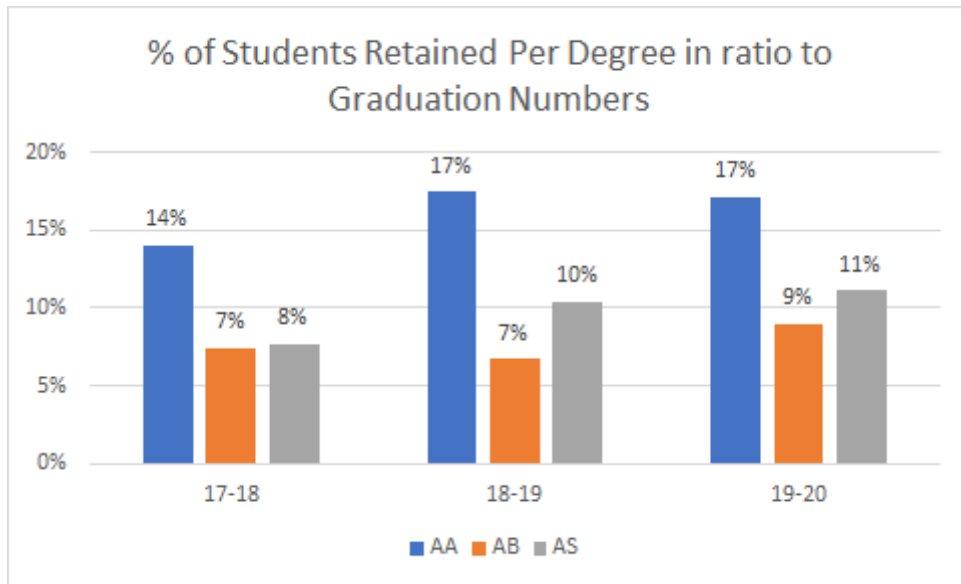
If students are changing degrees, what degrees are they changing into? To determine this, we compared the rates to similar degrees at WNC.

1. *Retention Rates in the AS degree compared to the Associate of Arts (AA) and Associate of Business (AB) degrees.*



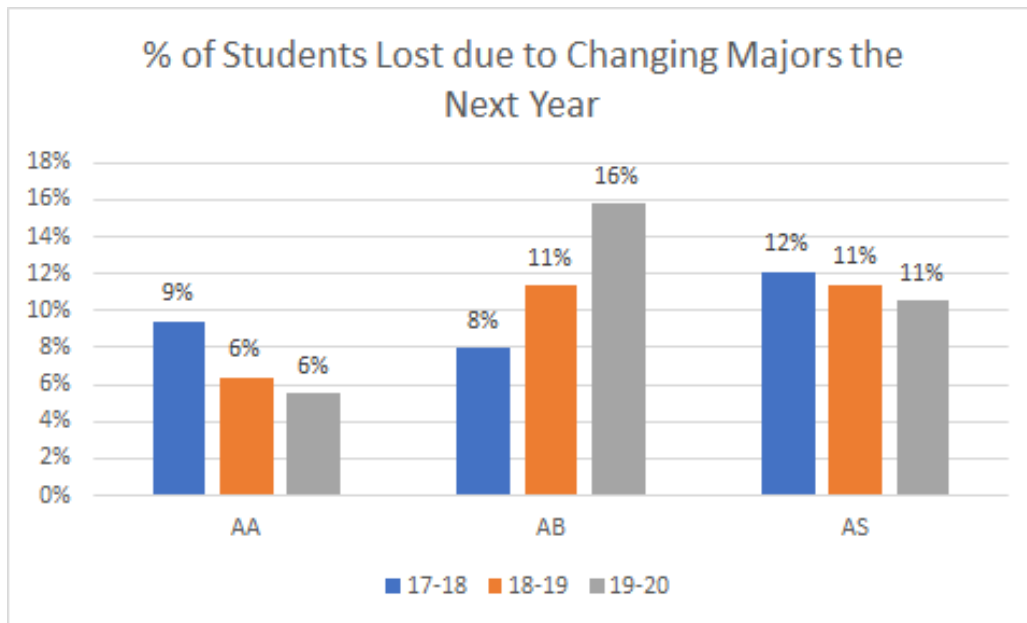
The retention rates were compared between 2017 to 2020. The AS degree retention rates were described previously. The AB degree held a similar pattern from 41% to 45%, but then dropped even lower to 38% between 2019-2020. The AA degree carries the greatest consistency at 42-45% between 2017-2020.

2. Graduation rates within AS degree compared with AB and AA degree earning students.



The retention rates were then compared to graduation rates between 2017 to 2020. According to this graph, 8% of students at WNC graduated with an AS degree in 2018, but that number increased slightly to 10% in 2019 and 11% in 2020. This compares to the AA degree which increased from 14% to 17% of graduates between 2018 and 2019, and the rather steady 7-9% of graduates with an AB degree.

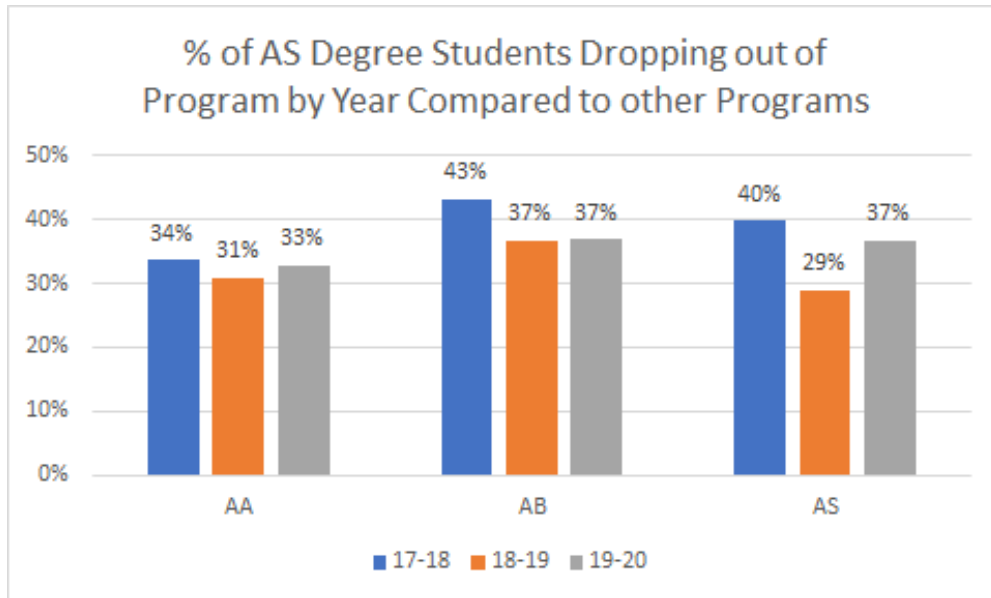
3. Percentage of students lost due to changing majors the next year.



The next graph is a more critical outlook of the percentage of lost students when they transfer to another degree between 2017 to 2020. The percentage of lost students in the AS is rather

consistent compared to the trends in other programs - it remains about 11-12%. In the AA degree, the percentage of lost students decreased from 9% to 6% in that time period, but in the AB degree, it increased from 8% to 16% of students.

4. *Ratio of students dropping out of the AS degree program compared to students in other degrees.*



The overall percentage of students who dropped out of the program (either because they did not return to WNC or transferred) were compared between degrees. The rates varied from 40% down to 29% and back up to 37% of students who dropped out of the AS degree between 2017 - 2020. This compares to a relatively consistent 31-34% of the AA degree-seeking students who dropped out. The AB degree-seeking students had a high of 43% drop out in 2018, but that dropped to 37% of students between 2018-2020.

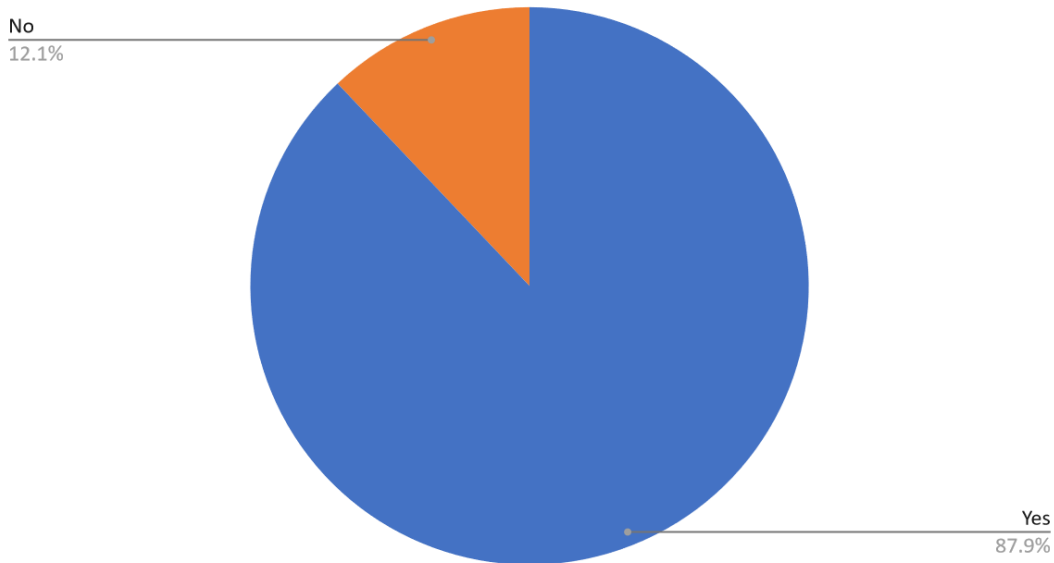
b. Potential Bottlenecks for Earning AS Degree

WNC AS Degree pathways alignment with transfer institutions

*Are the AS degree required courses really required? Or not not required when they should be?
How do they align with transfer degrees at UNR?*

We wanted to answer these questions particularly related to the MATH 181 requirement.

Is Math 181 Required for Transfer Degree? (2015-2020)



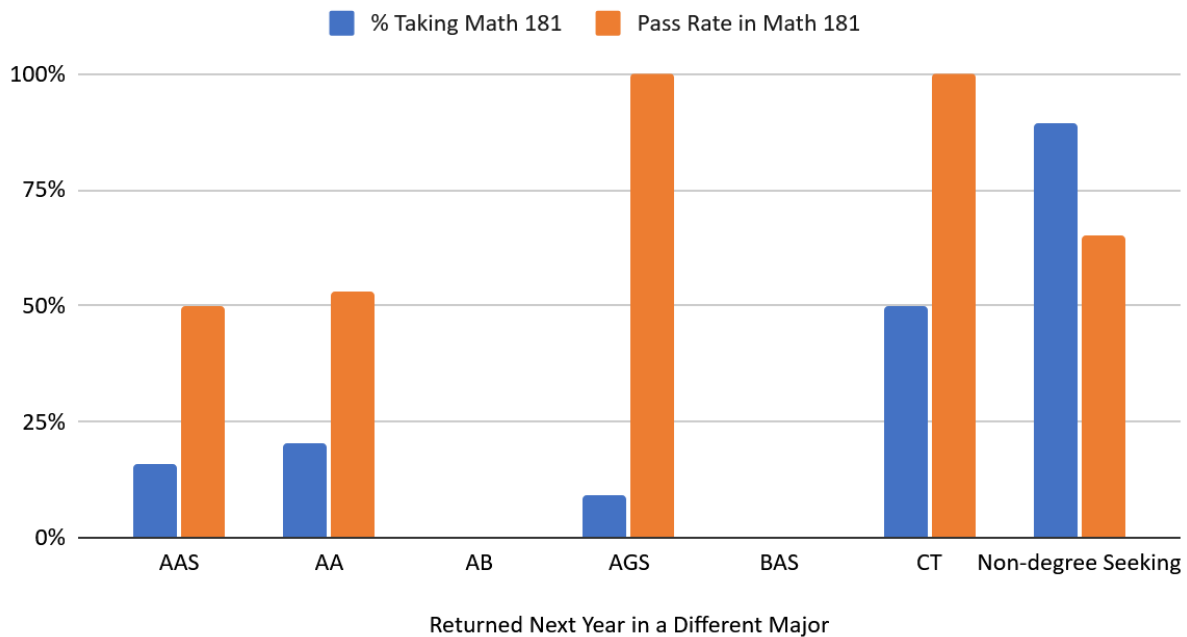
This chart shows that 87.9% of WNC to UNR transfer students completed MATH 181 and continued on to a Bachelor's degree that also required that level of math. However, 12% of transfer students completed MATH 181 in their AS degree even though their Bachelor's degree at UNR does not identify it as a requirement.

The Math 181 Requirement

How many 4-year degrees at UNR require Math 181? Is the Math 181 requirement an appropriate and competitive requirement for our students in the AS degree?

To answer these questions, we decided to examine how many students might be transferring out of an AS degree to avoid the Math 181 requirement and completing another degree instead.

% of students who took math 181 and transferred to another degree



The graph above compares the percentage of AS degree-seeking students who completed Math 181 and transferred to another major. This percentage is compared side-by-side with the pass rates from when they attempted Math 181.

Particularly out of the students who attempted an AS degree then transferred to either the AAS or AA degrees, it is evident that a rather small percentage of them attempted completing Math 181 before transferring. Conversely, a rather high percentage of students attempted Math 181 before transferring to non-degree seeking status.

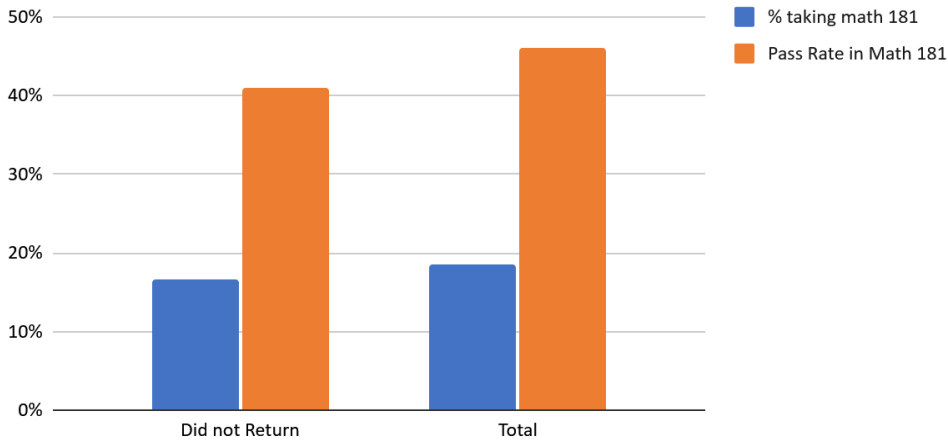
The numbers share some additional information that the graph does not; for example, only 2 students total transferred from the AS degree to the CT and AGS degrees which makes the percentages overrepresented compared to the other options.

The next graph shows the percentage of AS degree-seeking students who attempted Math 181 and did not return to WNC at some point. The percentage is compared with the rate of students

who passed Math 181 and the total who left the AS degree. Non-returning students are the greatest concern and the numbers are substantial.

% of AS Degree-Seeking Students who took Math 181 and Transferred out of the Degree

Comparing AS degree-seeking students who left the college with the total of lost AS majors



These graphs come with some caveats: first, they do not indicate exactly which semester students left, or classes that caused them to transfer to another degree or not return to WNC. By examining all of the attempts at passing Math 181 with the pass rate, we start to get a picture of whether students are struggling with Math 181 and then transferring out of the program because of that requirement.

The table below indicates that the Math 181 requirement is having an impact on students who are not succeeding.

The major they transferred into after the AS degree	# of Students Taking Math 181	Total Attempts at Taking Math 181	Pass Rate in Math 181
AAS	8	8	50%
AA	13	17	53%
AB	0	0	NA
AGS	1	1	100%
BAS	0	0	NA
CT	1	1	100%
Non-degree Seeking	17	23	65%
Did not Return	95	123	41%

Particularly, for students who do not return. In total, there were 123 attempts at passing Math 181 shared among the 95 students (i.e. it does not show how many attempts each student had). The pass rate is quite low at 41%. It suggests that this requirement is at least one, if not a major

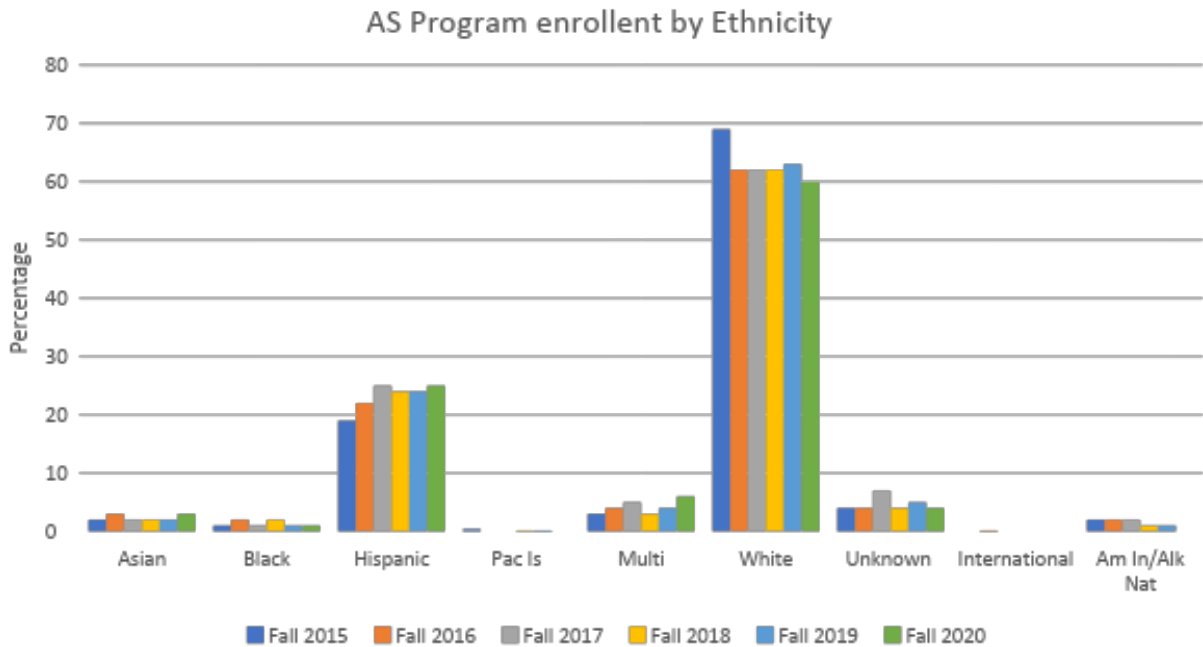
one, why AS degree-seeking students did not return to WNC - especially considering that this math requires several prerequisites and students are often well into their education when attempting it.

4. Equity and Inclusion

a. Demographics, Student Success, and Retention in AS Degree Program

The following graphs provide an overview of enrollment and graduation rates within the AS degree across demographics. The data show whether there are positive or concerning trends which help determine which support services are effective or need improvement in future years.

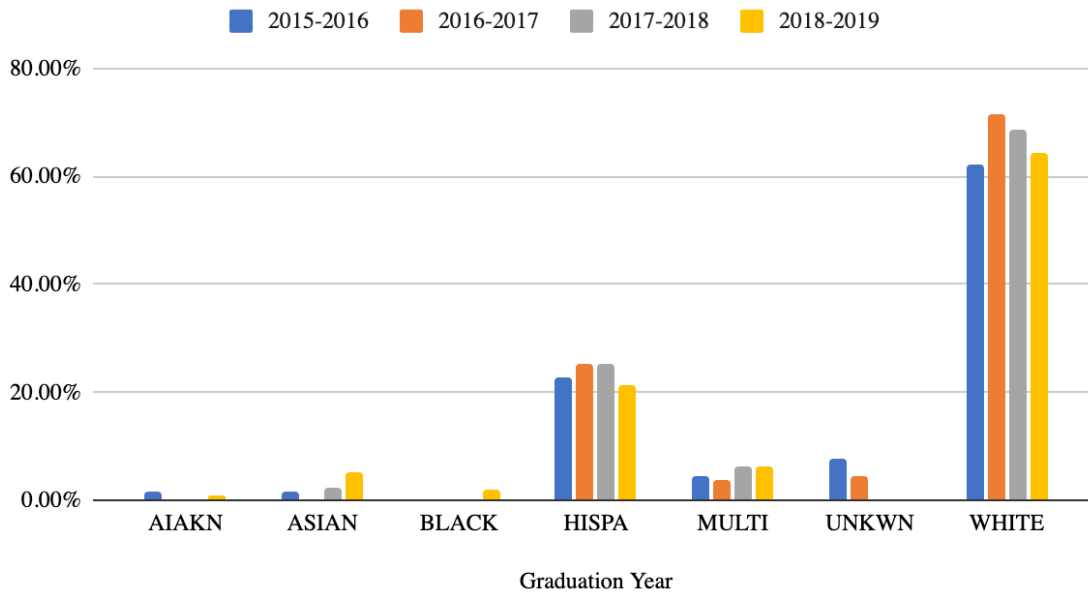
i. AS degree program enrollment by ethnicity



There were changes with enrollments by ethnicity from 2015 - 2020. The changes were mostly seen in Hispanic and White populations with the former gaining in enrollment numbers (~19 to 25% of enrolled population) and the latter dropping (~69% to 60%).

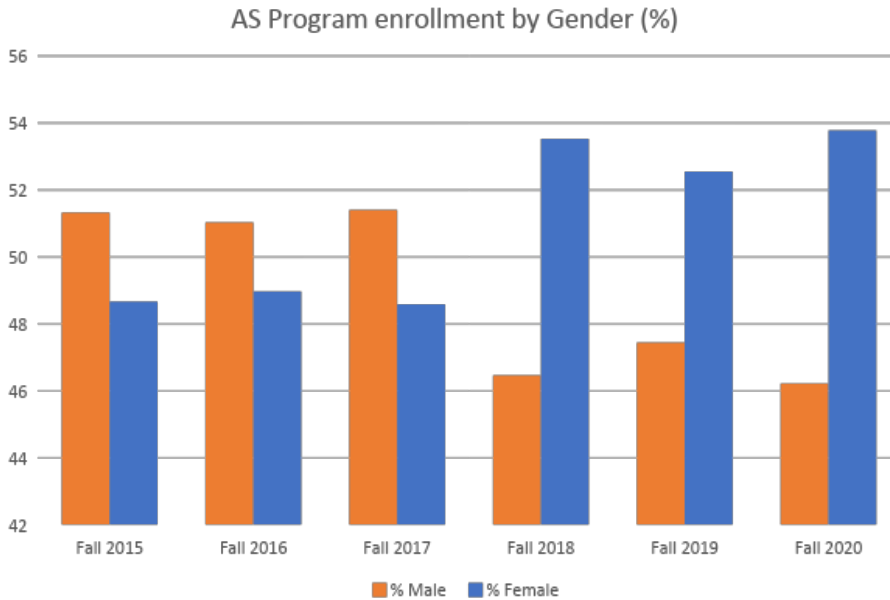
Comparing these numbers to WNC graduates with an AS degree by ethnicity:

Ethnicity of AS Degree Graduates by Graduation Year



There are some noteworthy patterns in graduation rates across ethnicities - mostly seen in the two most common ethnicities: White and Hispanics. The highest percentage of degree earners were White, but from 2016 - 2019, those percentages started declining from ~75% to 72%. There was a bit of an increasing percentage of degrees earned by Hispanics from 2015 - 2018 (22-23%, but then a drop in 2018-2019 (to ~21%). When comparing these numbers to enrollments, there is a gap in completion rates for degrees earned between the White and Hispanic students as the former earned over 70% of degrees compared to mostly ~60-63% enrolled and the later earning 21-23% of degrees even though they comprise of about 25% of the enrollment.

ii. AS Program Enrollment by Gender

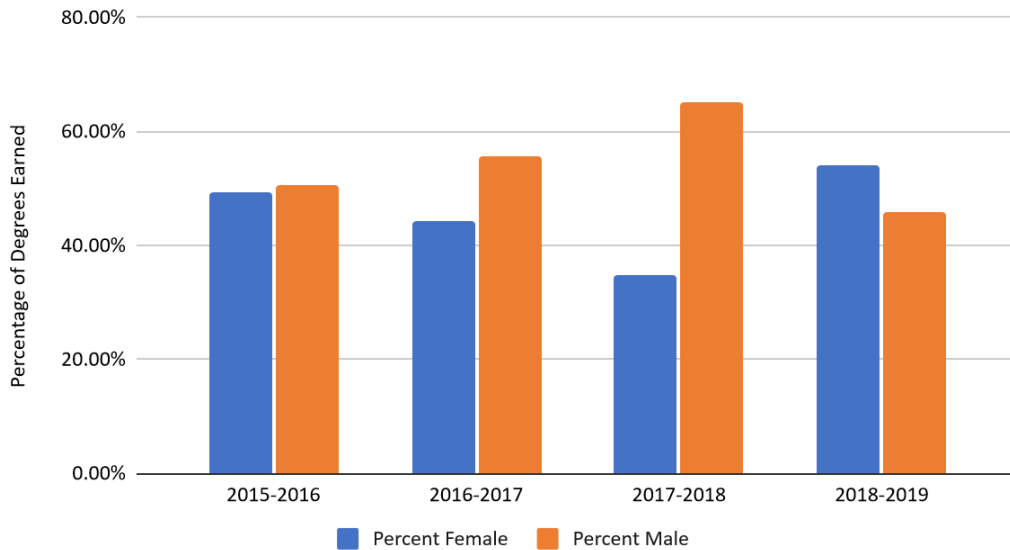


This chart shows the enrollment percentages comparing male and females. Males were enrolled in the AS degree in greater percentages from 2015-2017 (around 51% compared to 49% female). From 2018 through 2020, the trends flipped with females enrolled in AS degrees in greater numbers - around 53% compared to about 47% male.

To determine success in the AS degree program, these numbers are compared with the male

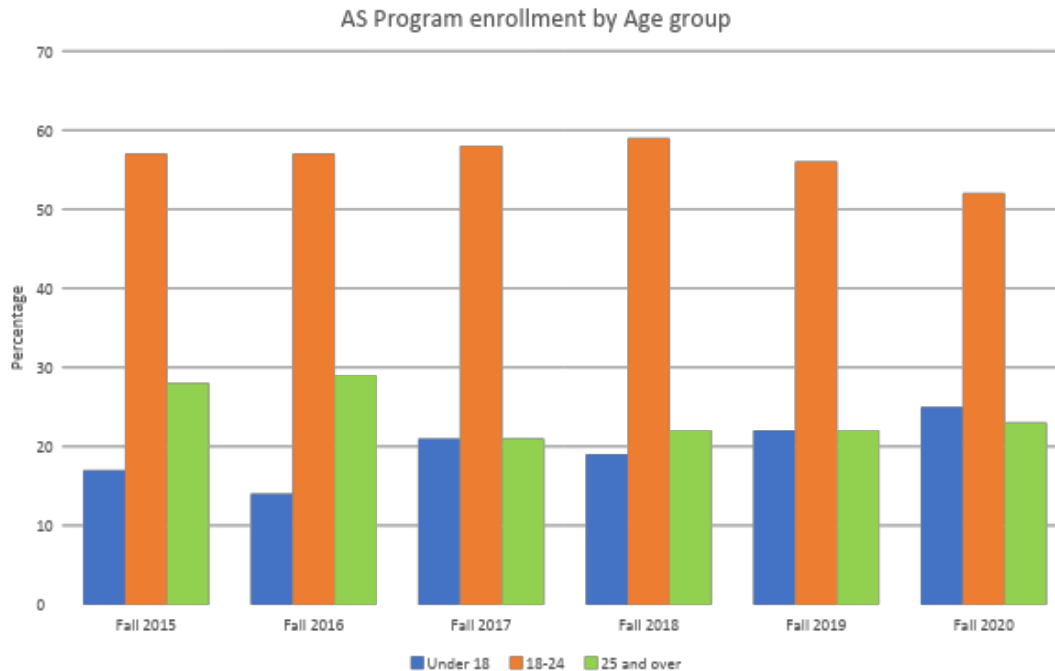
and female graduates between 2015-2019. The following chart compares the ratio of male and female graduates.

Female vs Male AS Degree Graduates by Year



It shows an increasing gap between male and female graduation rates between 2015 - 2018 (the biggest gap in 2017-2018 with females earning ~35% of the degrees compared to 65% of males). Comparing the degrees earned to enrollment figures, there were gaps in completion rates between males and females. E.g. Even though ~49% of those enrolled through 2017 were female, they made up less than 49% of the share of graduates (again, as low as 35%). In 2018-2019, however, females earned over 55% of the degrees vs. 45% male which means there was a reverse trend in completion rates compared to years prior (on the other hand, there was also a drastic change in enrollment percentages from 2017-2018 which could explain these changes).

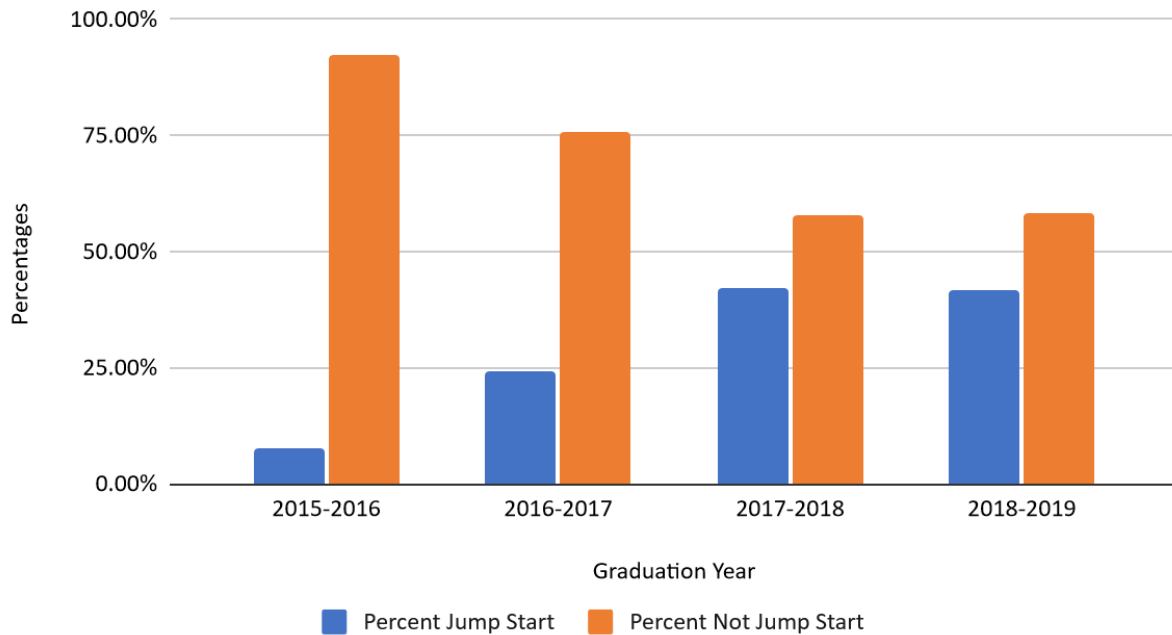
iii. AS Degree program graduates by age group



Between 2015 to 2020, enrollment by age has exhibited some changes. There appears to be a general upward enrollment with students under 18 years (from a lowest of about 14% to 25% in 2020). In the 18-24 age category, there was an increase in enrollment up until fall 2018 (from 57% to 59%) then started declining through fall 2020 to 52%. And the 25 and older category experienced a large drop between fall 2016 to fall 2017 (29% to 21%), but remained steady with slight increase through fall 2020 (to about 24%).

iv. Degree Completion Rates of Jump Start vs. non-Jump Start

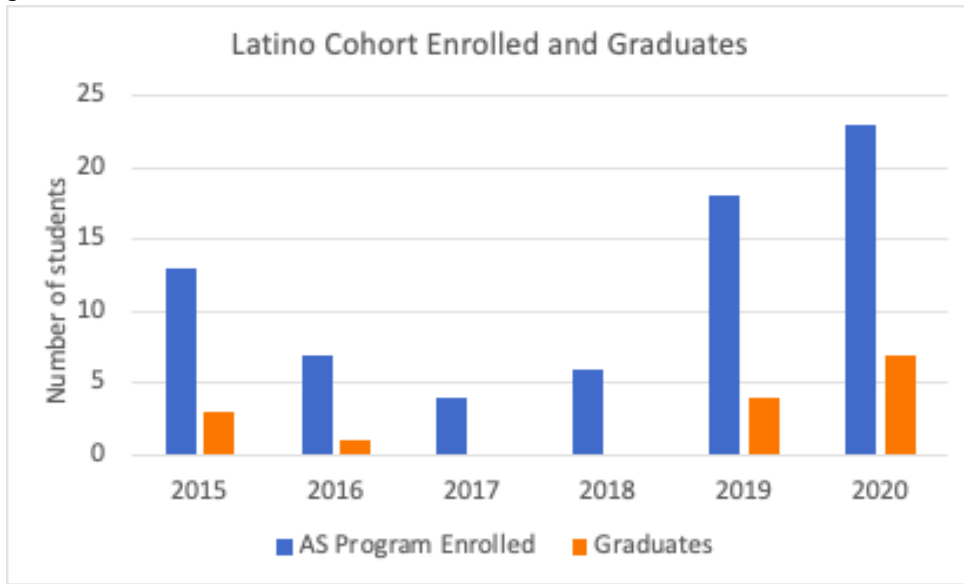
Degree Completion Rates Jump Start vs. Non-Jump Start



Comparing “Jump Start” and “non-Jump Start” graduation rates between 2015 to 2018 shows a distinctive trend: degree completion for Jump Start students rose in ratio to non-Jump Start students from less than 10% to over 40% between 2015-2018 (compared to over 90% down to about 60% for non-Jump Start). During the 2018-2019, the graduation rates plateaued between the two groups.

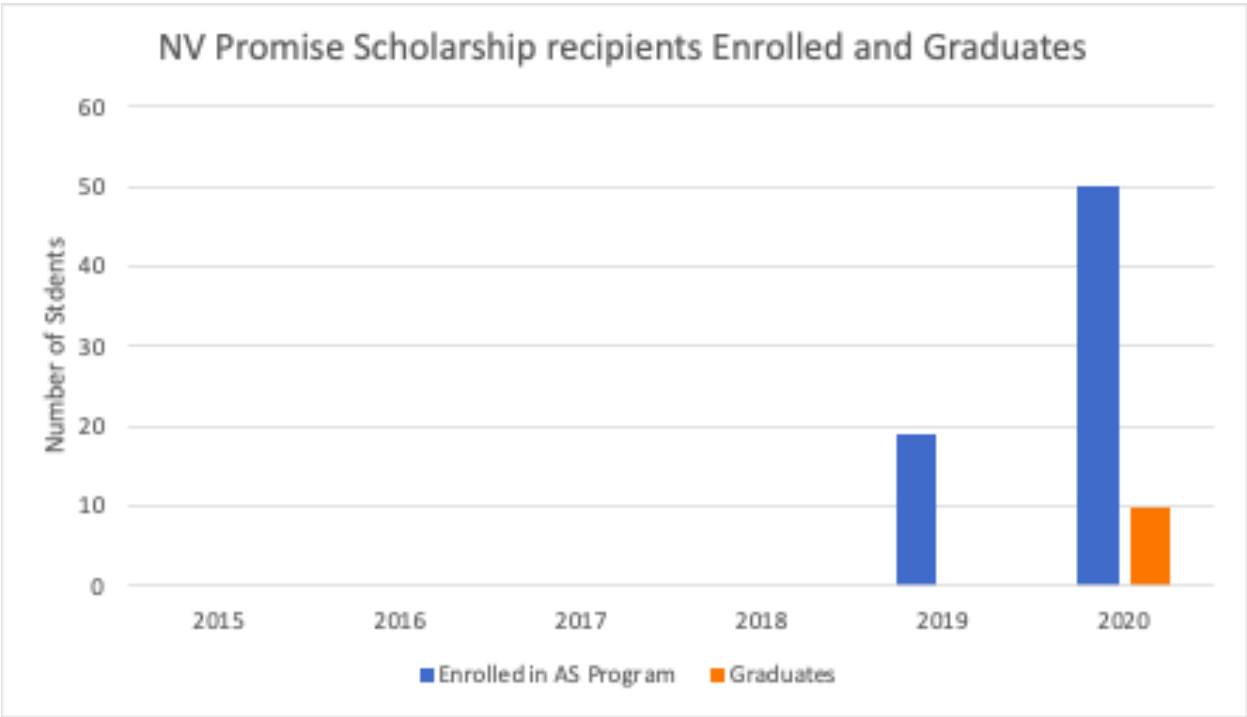
v. AS degree and Latino Cohort (Leadership Academy) enrollment compared to number of

graduates



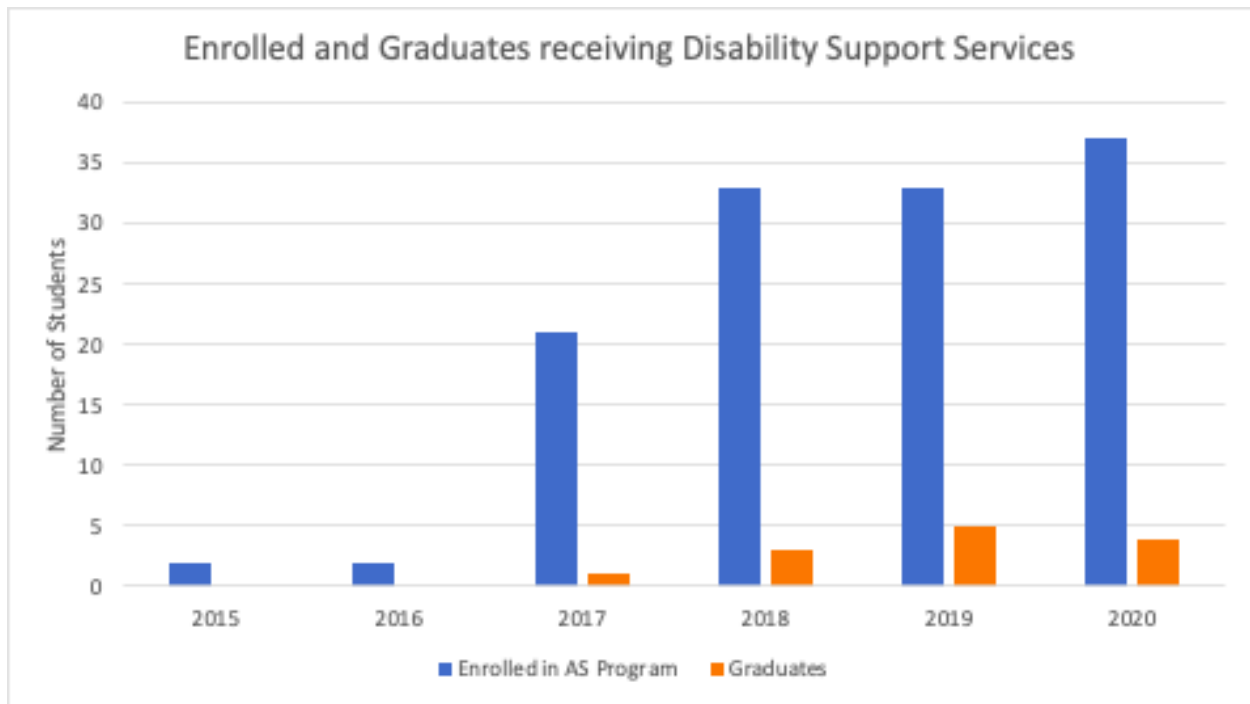
This chart compares the number of students enrolled in Latino Cohort from 2015-2020. The number of students enrolled in the program dropped from 13 students to 4 students between 2015 -2017. However, in 2017, the trends reversed and the enrollment increased significantly to 23 students in 2020. This graph also compares the number of graduates with similar trends, but not as high of numbers. From 2015 - 2017, enrollment in the program dropped from 3 students to zero. After 2018, the graduation rates picked up 4 students and then 7 students from 2019 -2020, respectively. There seems to be a rather large gap in success rates between those enrolled in the program and their graduation rates.

vi. NV Promise Scholarship recipients enrolled in AS degree compared to number of graduates



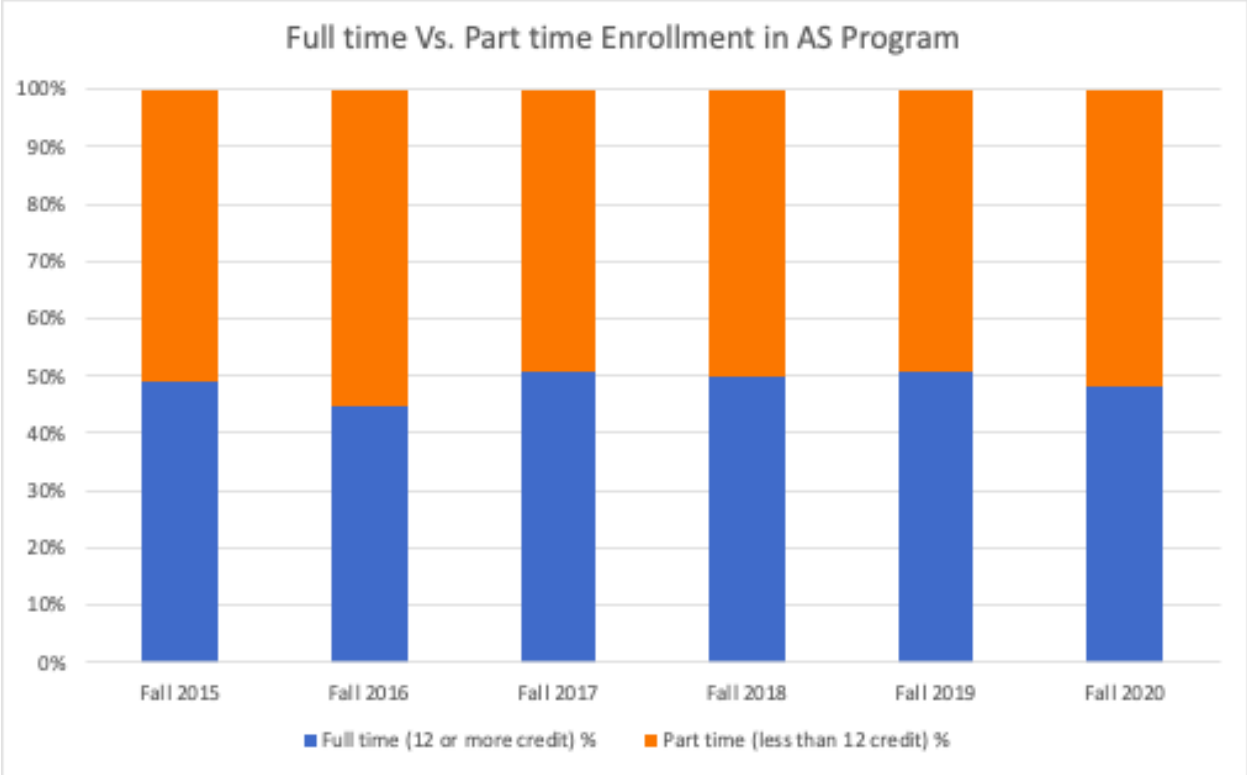
Note: The NV Promise Scholarship Program began in fall 2018. The students reported here completed all of the requirements for that program but may not have received any funds. Students are not always enrolled during the semester in which they receive their degree. Students in the programs reported here may have been a part of that program at any time during their academic career at WNC.

vii. Students majoring in the AS degree program who receive disability support services (DSS) compared with the number of graduates



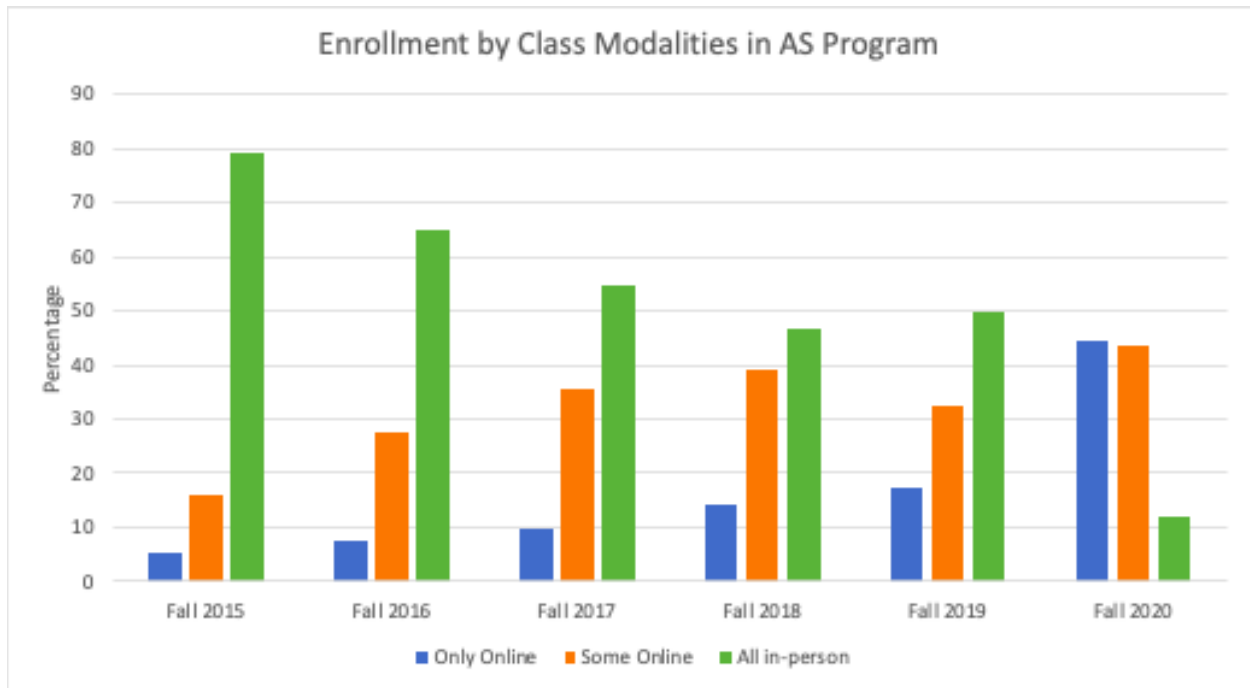
This graph compares AS degree-seeking students receiving Disability Support Services. Over the past 5 years, those numbers increased notably from 2015 with 2 students to 37 students in 2020. The number of graduates started in 2017 and increased to 4 students. There is evidently a large gap in completion rates for these students.

viii. Full-time vs. part-time students enrolled in the AS degree



This graph compares the ratios of full-time and part-time enrollments from 2015 - 2020. There is generally a rather consistent 50-50 split between the two groups with only a slightly bigger gap in 2016 (with about 55% part-time enrollment compared to 45% full-time). Part time enrollment tends to surpass full-time enrollment, but usually just by 1%.

ix. Trends of enrollment across different class modalities in the AS degree



This graph compares the percentages of AS degree-seeking students enrolled in only online courses, a mixture of online or in-person, or completely in-person. Overall, all in-person enrollment dropped steadily and only online or some online increasing from 2015 - 2018. There was a slight change in this pattern in 2019 with in-person enrollment increasing and some online decreasing (although only online still increased). There was a big disruption with normal scheduling in fall 2020 because of the COVID-19 pandemic, so a lot of in-person classes were pushed online or into hybrid format.

b. Academic Dishonesty

While academic dishonesty is not a new problem, it is possible that attitudes towards it post-pandemic may be changing. With the sudden increase in pay-for-service websites that give detailed solutions to subscribers' questions, it becomes a matter of equity to ensure these are not being used on exams where students from lower economic situations would be at a disadvantage. This is why it is important for WNC to monitor this situation to better understand why academic dishonesty may be happening as well as to better alter methods of assessment and testing environments to discourage cheating.

What is the current policy of WNC in regards to cheating?

[Policy 3-4-5](#) clearly states what is "Academic Dishonesty" under Section 3 as well as the complaint and hearing procedures in Section 5.

Is academic dishonesty a problem in the STEM fields?

Yes. According to a recent study "[Contract cheating by STEM students through a file sharing website: a Covid-19 pandemic perspective](#)" (Feb, 2021), the number of student requests for solutions to homework/test questions posted on the website Chegg from April 2020 to August 2020 increased 196.25% in the fields of Computer Science, Mechanical Engineering, Electrical Engineering, Physics and Chemistry. The study found that students are primarily using the site to receive solutions and not for guidance on the processes.

Source: "[Contract cheating by STEM students through a file sharing website: a Covid-19 pandemic perspective](#)" (Lancaster & Cotarlan) Feb, 2021.

What are students' perceptions of cheating?

In the 2020 article "[Academic Dishonesty and Testing: How Student Beliefs and Test Settings Impact Decisions to Cheat](#)" (Dryer, et al.), they found that

- a. students are more likely to cheat when exams are not proctored.
- b. students feel that it is the school's responsibility to provide a testing environment that discourages cheating.
- c. students feel that when a test is not proctored, that it is more OK to cheat.

Source: "[Academic Dishonesty and Testing: How Student Beliefs and Test Settings Impact Decisions to Cheat](#)" (Dryer, et al.), 2020.

Do WNC campuses have testing environments that discourage cheating?

It is of the opinion of the program review team that WNC testing centers lack the resources available to create an environment that discourages cheating. For example, at the Carson Campus, there are multiple testing rooms which are often left unsupervised for long periods of time due to a lack of staff. Technologies could be used to make up for the lack of human supervision, such as computer monitoring programs and surveillance cameras.

What is the current position of WNC faculty in regards to academic dishonesty?

Of the WNC faculty we surveyed, there has been a noticeable increase in instances of cheating in STEM fields. However, the majority of those who responded did not think it was a major issue in their classes.

Source: *Internal polling of 15 instructors in the STEM fields (9 responses), Sep 23-26, 2021.*

Recommendation

- Understand the problem better from the students' perspective. An anonymous survey of self-reported cheating should be given at some point near the end of the program to gauge how prevalent it is and why it is happening.
- Determine which technologies would make the job of the proctor easier to detect cheating. This may include purchasing online monitoring software as well as installing cameras in the testing center rooms. [UPDATED 9/27/21: Carson Campus reinstalled the web monitoring software LanSchool in Testing Center].
- Require testing centers to document all irregularities to better monitor the trends.
- Require a clearly stated "Ethics Clause" in every syllabus which outlines the current policy in regards to academic dishonesty as well as a link or web address to Policy 3-4-5.

5. Student Centered

a. Student Resources

To ensure the success of students at a small rural community college requires freely available resources outside of class to all students. Most resources available for students are found at the library. The concern of the team is whether these resources are widely known to the students and faculty and utilized by those who could benefit most from them.

Do students have access to the internet outside of school?

With the increase of homework being assigned online, a major concern is whether students have access to materials needed for success. While there are many financial issues facing our student population, access to the internet outside of school seems to be not one of them. According to the "[Fall 2019 WNC Student Needs Survey](#)", 98% of all respondents reported having off-campus internet access. However, since this data was collected online, these figures may be slightly inflated. Other forms of data collection may be needed to get a more accurate number.

Source: "[Fall 2019 WNC Student Needs Survey](#)." Prepared Jan. 23, 2020 by Mandy Billings, Planning and Assessment Coordinator, IRE.

Do students have free access to laptops/Chromebooks?

Since many instructors in the STEM-fields are moving their homework to online systems, it is important that students have access to computers and laptops. At WNC, there are currently (in 2021) 20 PC laptops for in-library use and 48 Chromebooks which may be checked out. The inventory is based on student demand.

Data: *Collected by Ron Belbin, Student Success Librarian. Received Sep, 2021.*

What materials and services are available at WNC libraries?

WNC campus libraries include access to academic coaching, borrowing of materials, computers, printers and copiers, course reserves, media services and study spaces. The website is well maintained and easy to navigate.

Faculty may place reserve items in the library for a class. Currently, in 2021, there are a total of 15 textbooks on reserve in the library. Faculty also place dvds, cds, and educational manipulatives on reserve on occasion.

Data: *Collected by Ron Belbin, Student Success Librarian. Received Sep, 2021.*

What tutoring resources are available to students outside of class?

The two main resources outside of class available to students at WNC are the NetTutor (Link-Systems International), which is embedded in Canvas, and the Academic Coaches who are available in the library. The NetTutor is outsourced and is available 24 hours a day, every day of the week. The academic coaches are available both online and in-person on the Carson and Fallon campuses during normal operational hours.

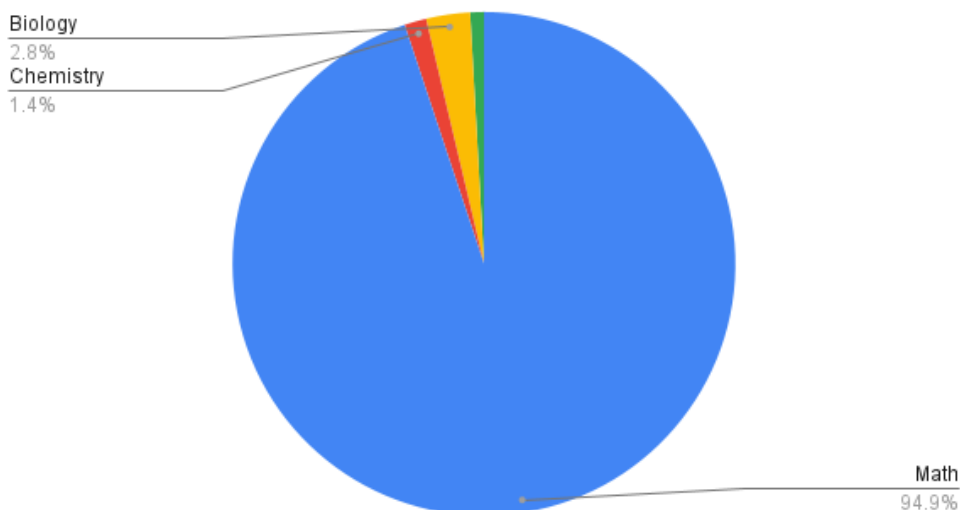
There are currently 22 academic coaches who provide coaching in American Sign Language, Biology, Chemistry, Communications, Economics, English/Writing, History, Journalism, Math, Philosophy, Political Science, Psychology, Reading and Sociology. The main focus is on Math and English/Writing.

Data: Collected by Ron Belbin, Student Success Librarian, 2018-2020. Received on 5/17/2021, 5/25/2021.

In what subject(s) are students seeking help outside of class?

The vast majority of sessions in the sciences with academic tutors and with NetTutor is in mathematics. In 2019-2020, there were a recorded total of 567 in-person academic sessions in the sciences. Of these, 538 were in Math, 8 were in Chemistry, 16 were in Biology and 5 were in Physics. Data prior to 2019 is unavailable.

Academic Coaching Sessions (2019-2020)



Data: Collected by Ron Belbin, Student Success Librarian, 2018-2020. Received on 5/17/2021, 5/25/2021.

Do students realize that such tutoring resources are available?

While there have been efforts in promoting such services, the proportion of unique students seeking such services appears to be relatively small, especially in areas outside of mathematics. It is possible that it is overlooked by a substantial part of our student population as it is unclear if instructors are aware of or are promoting the service in their classes. While more data is needed to determine how many unique student sessions there are as well as how many students are aware of such services, we believe that there are simple changes that could be made to ensure all students are aware of such services (see recommendations below).

Recommendations

- Include a reminder along with application forms for faculty to reserve textbooks and other materials when sending textbook requests for the following term.
- Foster closer collaboration between academic coaching and faculty so that each faculty knows who the coaches are and the coaches know what materials are being discussed in their respective courses.

- Schedule an academic coach in each respective subject area to visit each relevant class for a short 10-15 minute presentation at the beginning of each term. Alternatively, have the instructor visit the library with the class for a short tour and explanation of services.
- Draft a section about academic coaching to be included in all syllabi in courses where academic coaching is available.

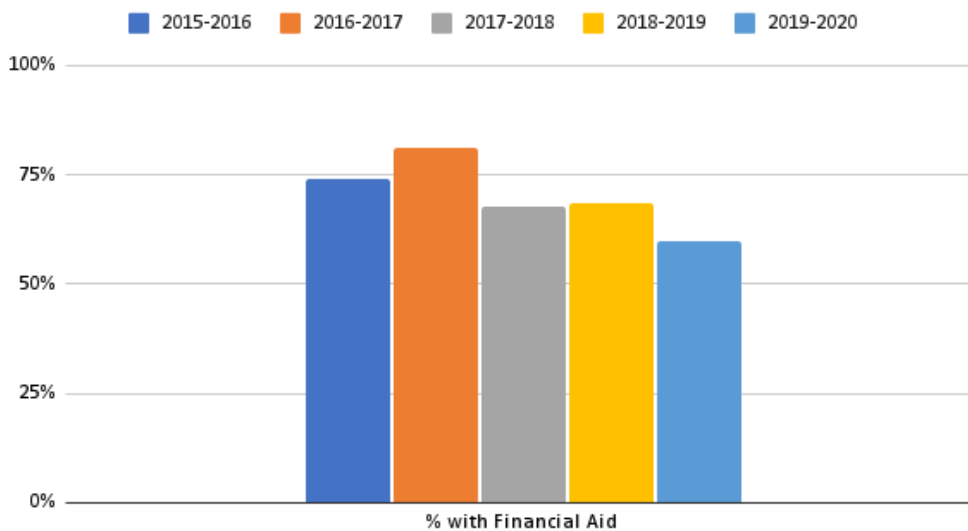
b. Financial Aid

Many students at WNC rely on financial aid to complete their AS degrees. We look at the trends in what scholarships AS degree-seeking students are awarded.

How many students in the AS Program receive financial aid?

The majority of AS degree recipients received some sort of financial aid in their pursuit of their degree. In the years 2015-2020, there were a total of 486 degrees awarded with 324 of them receiving some sort of financial aid. As a percentage, the figures have been trending slightly downward in the last 5 years.

AS Degree Recipients who have Received Any Financial Aid



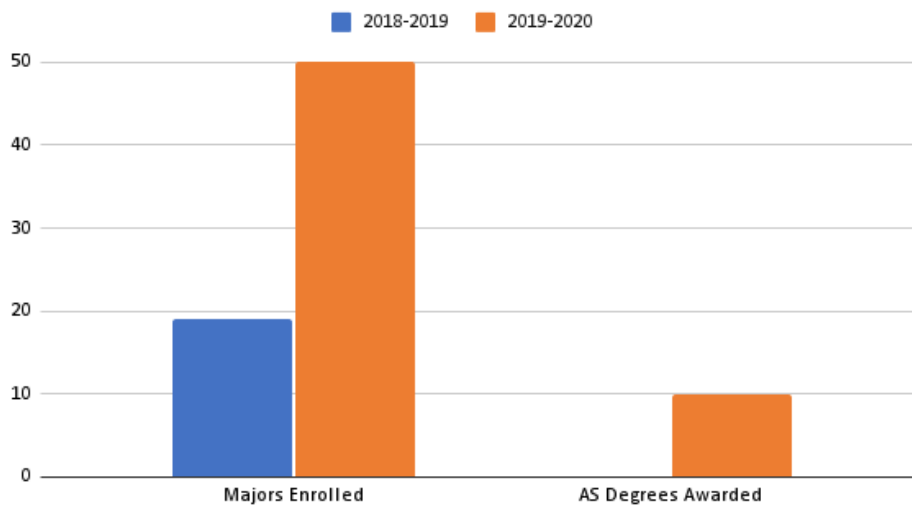
Data: WNC Institution of Research & Effectiveness Archives, 2021

What is The Promise Scholarship and how many AS degree-seeking students at WNC receive it?

Started in the Fall of 2018, The Nevada Promise Scholarship was established by the Nevada Legislature for Nevada high school graduates to attend community college. It can cover up to three years of tuition and other mandatory fees. More information can be found on the WNC website [here](#).

In the inaugural academic year 2018-2019, there were a total of 19 AS degree-seeking students who were awarded the NV Promise Scholarship. In 2019-2020, there were a total 50 students awarded the scholarship and 10 who graduated while receiving the scholarship.

NV Promise Scholarship Program



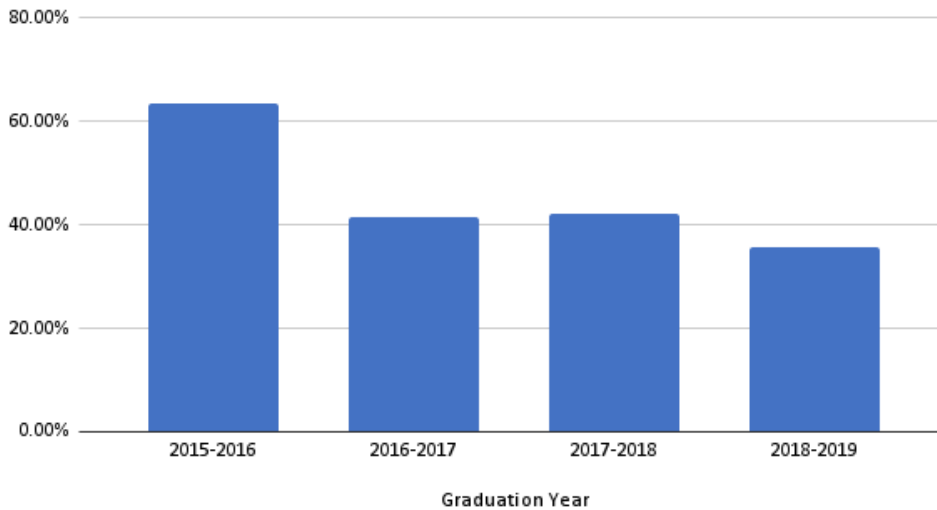
Source: *WNC Institution of Research & Effectiveness Archives, 2021*

What is The Pell Grant and how many AS degree-seeking students at WNC are eligible?

A federal Pell Grant, does not have to be repaid. Pell Grant program is federally funded with the purpose of helping financially needy students meet the cost of postsecondary education. This program is centrally administered by the federal government and is typically the foundation of a student's aid package. Students must demonstrate financial need to qualify. To qualify, family income should be below \$50,000 with most awards going to family incomes of less than \$20,000.

The following graph shows the percentages of AS graduates who were Pell Grant eligible.

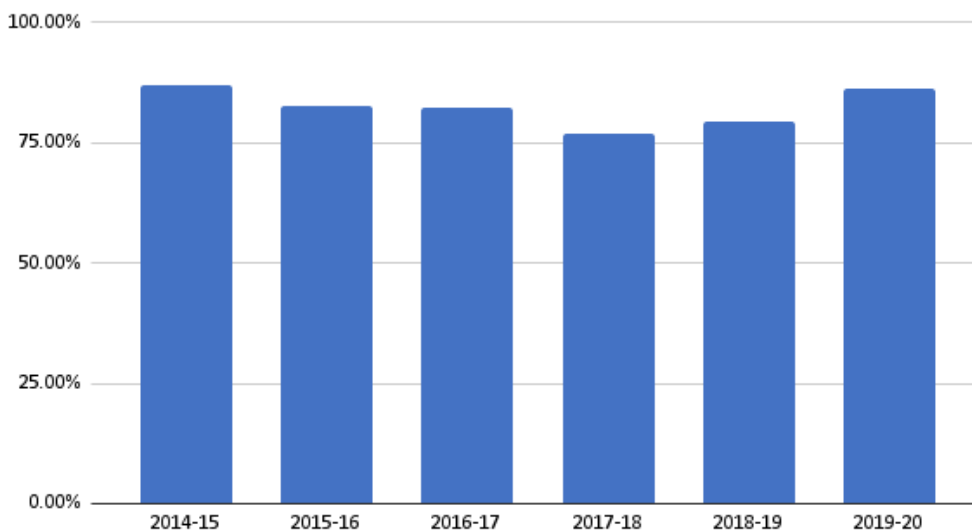
Pell Grant Eligible: Percentage of AS Graduates



It is unclear if this is a trend downward, or if 2015-2016 was an anomalous year.

The good news is that the majority of AS majors who are Pell Eligible receive the Grant as the following graph illustrates.

Percent of Pell Eligible who Received Pell Grant (AS majors)



In 2014-2015, 87.04% of AS majors who were Pell Eligible also received the grant. In 2019-2020, the figure was 86.11%.

Graduation rates for non-Pell Grant recipients steadily increased between 2015-2018 from over 20% to over 60%. On the other hand, graduation rates for Pell Grant recipients dropped between 2015-2016 to 2016-2017 (overlapping with the enrollment trends). Beyond 2017, there is a slight increase in graduation rates, but the trend is not as evident as the non-Pell Grant recipients. These trends should continue to be monitored in the upcoming years as the impact of the Pell Grant on disaffected populations is clear (see also [CAPSEE paper](#)).

Sources:

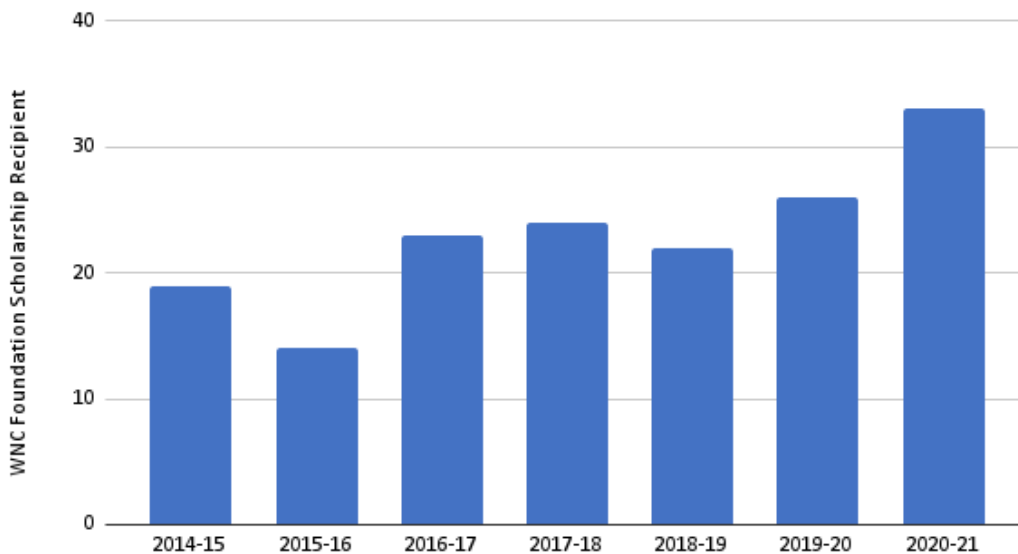
- "AS Grads with UNR Data Fall 2011 to Summer 2019", WNC IRE.
- "AS 2015 2020 Additional Data", WNC IRE, Sept 2021.
- ["The Impact of Pell Grant Eligibility on Community College Students' Financial Aid Packages, Labor Supply, and Academic Outcomes"](#), A CAPSEE Working Paper, (2017).

What is the WNC Foundation Scholarship?

Each year, WNC Foundation awards scholarships to students on the basis of academic criteria or any combination of academics, field of study, financial need, activities, community service, and other criteria.

Below is a graph of the number of WNC Foundation Scholarship recipients.

WNC Foundation Scholarship Recipients (AS Major)



The percentages of AS majors who received this scholarship has been between 2.28% in 2015-16 to 4.26% in 2019-20.

Source: "AS 2015 2020 Additional Data." WNC IRE, Sept 2021.

How does WNC promote such scholarships?

When the deadline for the application of the foundation scholarship approaches, easy to find links on the website, in canvas as well as in email notifications give students plenty of exposure to the scholarship opportunities. Also, yearly visits from the Rural Development Coordinator to individual classrooms to explain and answer questions regarding scholarship opportunities increase this awareness.

Recommendations

- Continue the ongoing efforts to promote these scholarships.

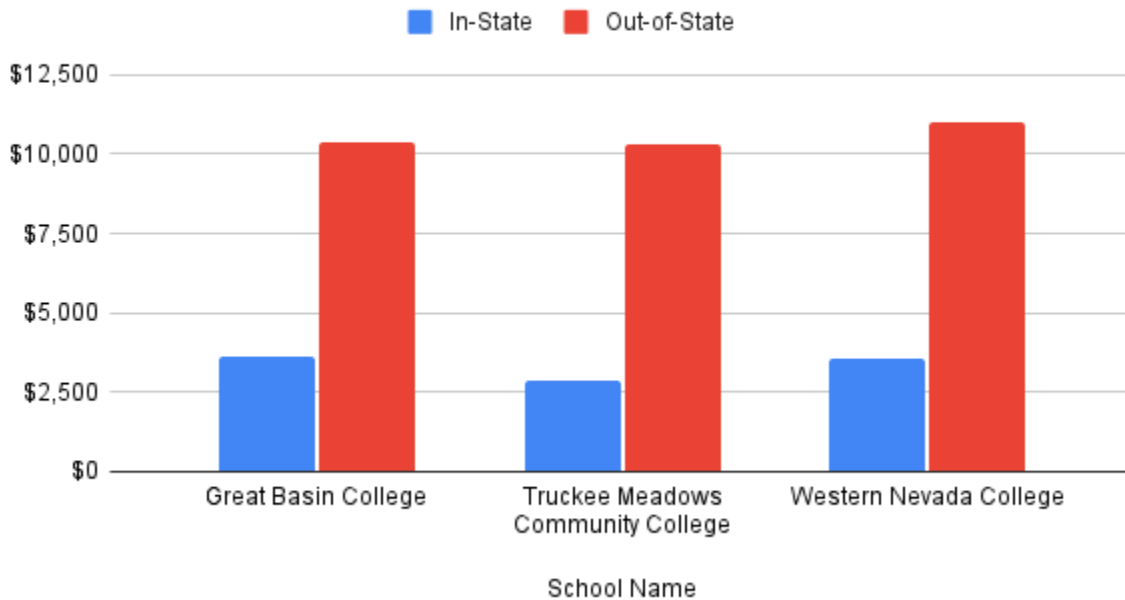
c. Affordability and Value

While tuition at WNC is reasonable, there are ways we can improve the affordability. A major way we could potentially reduce total cost to students is by the adoption of low-cost/no-cost materials in STEM courses. This would benefit students in the STEM fields the most, where a textbook costs about 50-85% more than a non-STEM course. We also look at the return on investment of an AS degree and compare that with entry level positions offered by companies on USA Parkway.

How does WNC compare in Tuition and Fees?

According to the U.S. Department of Education, the average in-state cost of tuition & fees for a WNC student in 2019-2020 was \$3,548. For comparison, TMCC was at \$2,862 and GBC was at \$3,593.

Tuition & Fees Comparison



Source: *National Center For Education Statistics, March 2, 2021. U.S. Department of Education.*

Is an AS degree still worth the cost?

With the continuing rise of new companies on USA Parkway offering high school graduates between \$17-\$20 per hour, it is important for WNC to illustrate to the community the value of an AS degree. Also, according to a 2019 Pew Research Center study, only "about half of American adults think colleges and universities are having a positive effect on the way things are going in the country these days." About 38% even say they are having a negative impact. It is for these

reasons that we need to make clear that there is a monetary value to receiving an AS degree to our students and our community.

The good news is that according to the U.S. Bureau of Labor Statistics (BLS), in 2018 workers with an associates degree (AA or AS) makes about \$862 per week as opposed to \$730 per week for someone with just a high school diploma. Entry positions at Tesla and Panasonic pay around \$18.25 per hour which would amount to exactly \$730 per week. While the data presented is national, it aligns well with specific positions available to WNC graduates in the region. Refer to the [Career Earnings report](#)

posted on the NPWR website.

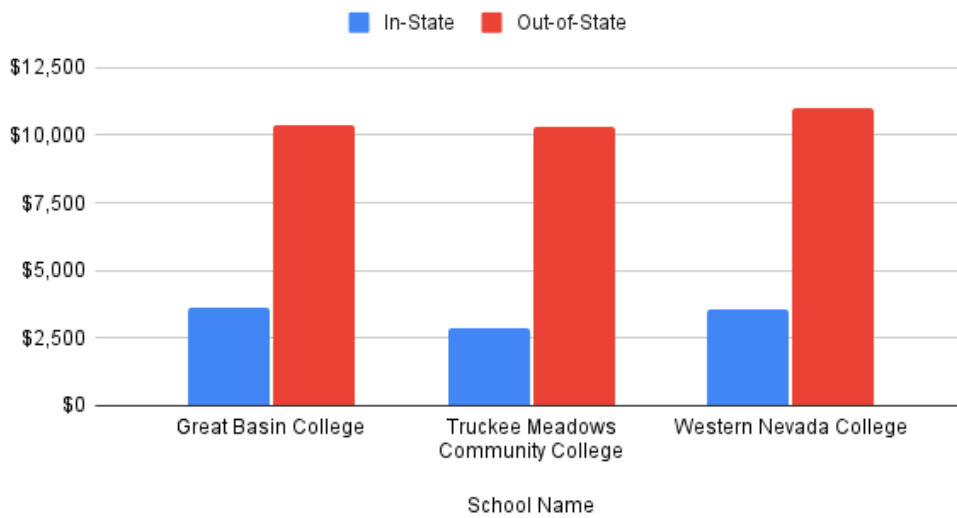
Sources:

- ["The Growing Partisan Divide in Views of Higher Education](#)
- [\(Links to an external site.\)](#)
- ", *The Pew Research Center, 2019.*
- *U.S. Bureau of Labor Statistics, 2018*
- ["Career Earnings report](#)
- [\(Links to an external site.\)](#)
- ". *NPWR Reports. Retrieved 2021.*

How much are students paying for textbooks at WNC?

WNC currently does not collect this data. However, the estimate given by U.S. Department of Education has WNC students paying on average \$1,400 per academic year for books and supplies. For comparison, they have TMCC students paying an average of \$1,318 on average and GBC at \$1,670.

Tuition & Fees Comparison



These numbers are likely deflated due to the inclusion of non-STEM-based course materials, which costs on average 50% lower than STEM-based books and materials. Even in using the lower estimates, *books and supplies amount to about 35-40% of the total cost of the degree* for an in-state student at WNC.

Source: *National Center For Education Statistics, March 2, 2021. U.S. Department of Education.*

Are textbooks for courses with high enrollment available for use in the library?

A possible solution to the problem of high-cost materials is to have textbook copies on reserve in the library. However, it is currently not the policy of the library to request textbook titles from instructors. Also, many instructors do not place their textbooks on reserve in the library despite having this option. It is possible that this is an oversight and could be rectified by simple reminders to faculty. Refer to the previous section on "Student Resources" for more on this.

Source: *Email exchange with Student Success Librarian, Ron Belbin. Received May 25th, 2021.*

Do students studying in the STEM fields delay or even not buy the required textbook to save money?

Currently, WNC does not collect data on this question. However, there has been much research on this question in the past few years. What has been found is that actually *the majority of students* surveyed have either delayed buying the textbook or did not buy it at all due to exorbitant costs in at least one class. For example, in U.S. PIRG (consumer advocacy group)

survey, 65% of college students said they have delayed buying a textbook because it was too expensive and, in some cases, done so even though they were worried the decision would hurt their grade.

Source: "[Fixing the Broken Textbook Market](#)", US PIRG survey, 2019.

What is WNC doing to reduce the cost of materials such as textbooks?

There are many WNC instructors currently using or planning to adopt open educational resources (OER). For example, all physics textbooks as well as many math textbooks in use at WNC are OER. While the exact number of courses using OER is not currently known, this information is being gathered by the OER Community of Practice and the results should be known within the year 2021.

Source: *Email correspondence to selected instructors, 2020-2021.*

What are the nationwide trends toward the promotion and adoption of OER materials?

Since tuition and fees are only a part of the total cost to the student, we also need to include textbook and fees to get an estimate for the total cost to the student. While these are traditionally kept hidden from the student until the first week of class, the trend is changing among community colleges.

For example, in 2018, the US Congress started the [Open Textbook Pilot](#) grant program which it has [renewed for 2020](#). This grant provided \$7 million for grants to institutions of higher education in 2020 to implement programs that reduce the cost of textbooks through expanding the use of open educational resources.

On the state level, Oregon's public colleges will be required by law to disclose textbook prices before students enroll starting in 2022 ([HB 2919](#)). In 2015, California passed a law ([AB-798](#)) to provide incentives and reward campuses to "accelerate the adoption of lower cost, high-quality open educational resources". In 2021, California's Gov. Gavin Newsom has expressed that he wants California to spend an additional \$15 million (on top of the \$5 million spent on similar programs in 2016-2017) to take aim at "usurious costs" of commercial textbooks today. These are just two examples of policies by state governments. For a full list of state legislative activity relevant for the adoption and promotion of OER materials, visit the OER State Policy Tracker (<https://sparcopen.org/our-work/state-policy-tracking/>).

Source:

- ["Congress to Renew Open Textbook Pilot Grant Program with \\$7 Million Appropriation](#)
- [\(Links to an external site.\)](#)
- ", SPARC. Retrieved on Sept 12, 2021.

- ["OER State Policy Tracker"](#), SPARC. Retrieved on Sept 12, 2021.

Recommendations

- Collect data on textbook purchasing habits of students so that WNC's Institutional Research and Effectiveness has access to it. Include these costs in total cost estimates for the AS program.
- Collect data on textbook use by students. This should include how many students purchased the book, used the book and of those, how many found the book necessary for success in the course.
- Include "Low-cost/No-cost" textbook search options in the course catalog. Determination of "low-cost" may be decided upon by the OER Community of Practice.
- For high-enrollment courses that opt-out of using a low-cost/no-cost textbook, include at least one copy of the textbook on reserve in the library.
- Have the library include a depository of peer-reviewed OER materials for STEM courses offered at WNC.
- Work with faculty in each discipline to discover high-quality open-source materials that may be included in the depository.
- Increase awareness of no-cost/low-cost materials and promote the use of them by possible financial incentives to the instructors who use them.

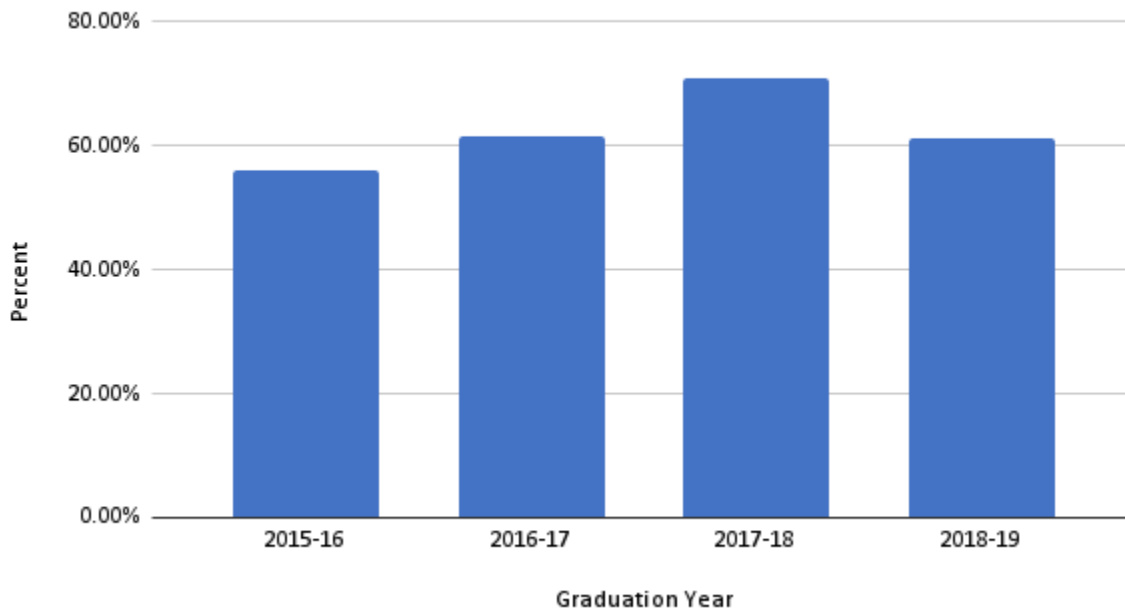
6. Transfer Education

We looked at the number of students who graduated with an AS degree that transferred to the University of Nevada Reno. We also look at what they major in, and the success rates at UNR.

How many AS students transfer to UNR?

In each year, well over half of students who graduate with an AS degree go on to transfer to UNR. Below is a chart showing the percent of AS degrees who transfer to UNR.

Percent of AS Degrees who Transfer to UNR

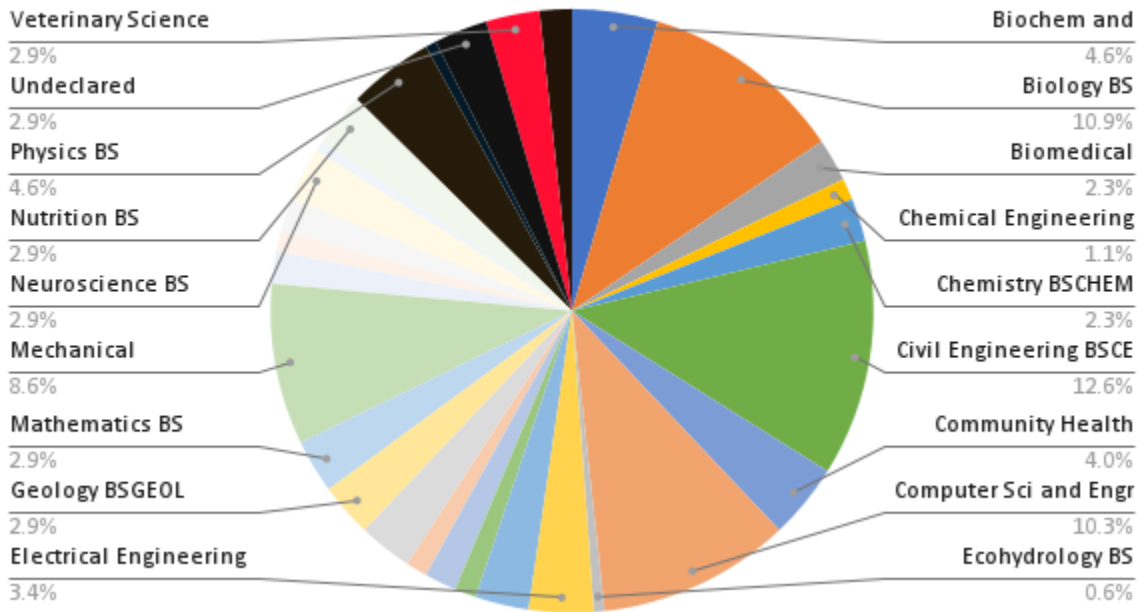


Source: "AS Grads with UNR Data Fall 2011 to Summer 2019", WNC IRE.

What do AS transfer students to UNR study?

The following graph shows the first declaration at University of Nevada Reno of an AS degree transfer student.

First UNR Declared Major by WNC AS Students (2015-2019)



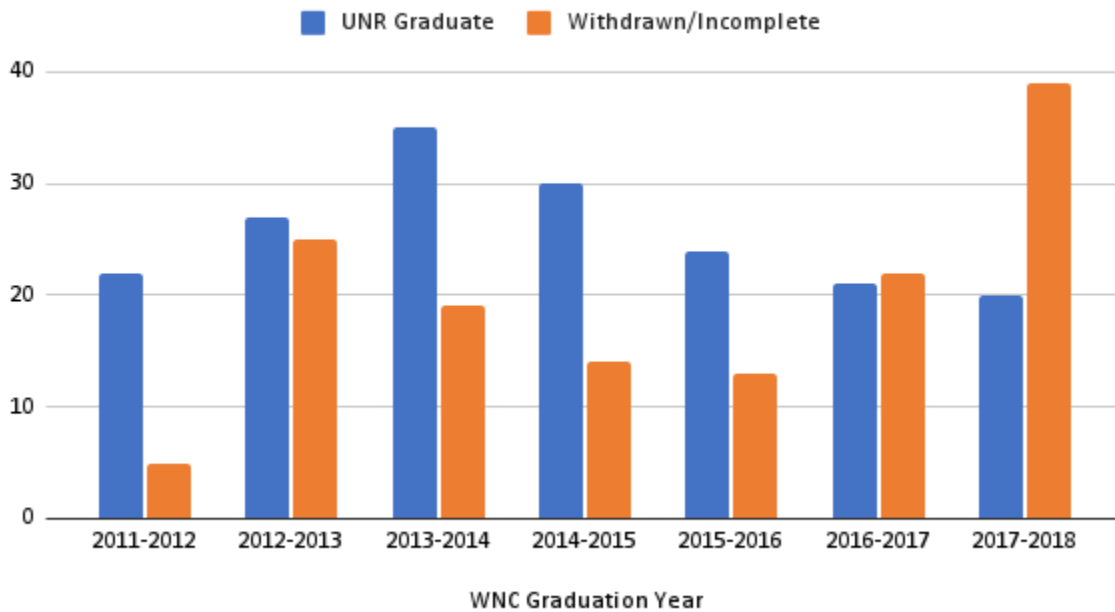
Over 40% of AS transfer students who go on to a STEM major are majoring in either Mechanical Engineering, Civil Engineering, Computer Science or Biology.

Source: "AS Grads with UNR Data Fall 2011 to Summer 2019", WNC IRE.

Do AS transfer students graduate with a bachelor's degree?

Below is a graph showing the number of AS degree students from WNC who transferred to UNR and graduate as opposed to withdrawing, taking a hiatus, or in progress of earning their degrees from UNR from 2011-2018. The graph also shows the number of students who have withdrawn, are taking a hiatus or are in progress of earning their bachelor's degrees.

UNR Graduate vs. Withdrawn/Incomplete



Notice that the number of incomplete/withdrawn from 2016-2018 is as expected as many of these students are still working toward their bachelor's degree. The encouraging trend is from 2012 to 2015 where we see the number of withdrawn/incomplete declining. There is no reason at this point to assume that this trend couldn't continue into 2016 and 2017 as many of these students receive their degrees. This increase in students completing their degrees may also show up in the next few years with an increase in the number of UNR graduates. We would like to see an increase to the 2012-2013 levels in the next few years.

Source: "AS Grads with UNR Data Fall 2011 to Summer 2019". Retrieved from UNR Office of Institutional Analysis via WNC IRE. Sep 20, 2020.

7. Recommendations

1. Explore the alternative pathways to Math 181 for possible transfer students who don't require this course for their major.
2. Currently, only pathways that students can complete an AS degree online is with Geology which fulfills the Group A lab science requirements. Based on the enrollment data, we should offer more online pathways for AS degrees, especially in Group A lab sciences.
3. Increase awareness of PSLOs and offer professional development opportunities for faculty. This should include improved standardization and reporting of student success using clear benchmarks.
4. Approve the recommended changes to PSLOs and reduce their redundancies with ISLOs.
5. Being a Hispanic Serving Institution, we should explore ways on closing the gap between enrollment and degree completion seen with the Hispanic student population.
6. Collection of data and surveying of students seeking accommodations with DSS and counseling to better understand the increasing trends in these services.
7. Contribute to OER Community of Practice mission to create a searchable low-cost/no-cost textbook option in the course catalogue.
8. Cataloging and reporting of academic dishonesty at testing centers to monitor trends in possible academic dishonesty in the STEM fields. Also, to conduct a review of environments of proctoring services to ensure they limit academic dishonesty.

APPENDIX

This report contains acronyms. The acronyms will represent the following terms in alphabetical order:

AA - Associate of Arts (degree)

AAS - Associate of Applied Science (degree)

AB - Associate of Business (degree)

AS - Associate of Science (degree)

BIO/BIOL - Biology

BS - Bachelor of Science

CLO - course level objectives

GBC - Great Basin College

IRE Department - Institutional Research & Effectiveness Department at WNC

ISLO - Institutional Student Learning Outcome¹

PSLO - program student learning outcome²

STEM - Science, Technology, Engineering, Math

TMCC - Truckee Meadows Community College

UNR - University of Reno

WNC - Western Nevada College

¹ The ISLO's are technically referred to as just SLO's (student learning outcomes) within WNC, but we will refer to them as ISLO's to differentiate them from the program level outcomes.

² Program refers to the Associate of Science degree

9. Supplemental Documents

For supplemental documents, visit AS Review Canvas site.