

Technical report on shit university leaders should know about UO's undergrads

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Abstract

This is a half-assed¹, wholly irreverent², probably offensive, yet mostly methodologically sound technical report which aims to answer the following research questions (RQs) about undergraduate students at the University of Oregon (UO):

- *RQ1: Has UO seen grade inflation?*
- *RQ2: Are high performing students more likely to be men or women at UO?*
- *RQ3: Which majors produce students with higher GPAs?*
- *RQ4: When considering in-state / resident students, which geographic areas of the state produce higher performing students? Similarly, which geographic areas don't produce high performing students? How does this production intersect with race and sex?*

It goes without saying that this work is not peer-reviewed, and like hell am I dragging some poor faculty member into my academic politicking to help look over my shoulder and constructively critique my methodology. That said, here are the takeaways (TA):

- *TA1: The percentage of full time enrolled students with term GPAs of 3.75 or above has increased from 7% in Spring Term 2012 to 23% in Spring Term 2022.*
- *TA2: Our findings suggest that women at UO are consistently more likely than men to be among the top performing students in the past decade. On average, women are overrepresented among top performing students by an additional 6%, even when controlling for their slightly higher enrollment numbers.*
- *TA3: These majors each produced more than 65 Dean's List students during at least one term since Winter Term 2020 and have also more than doubled their number of students on the list since pre-COVID times. A major's percentage increase in Dean's List students compared to pre-COVID times is in parentheses: Business Administration (up by 293%), Cinema Studies (152%), Family and Human Services (271%), Jour: Advertising (167%), Jour: Public Relations (151%), Journalism (139%), Political Science (104%), Psychology (116%). Your major/field not listed? Don't worry, this is just the tip of the iceberg. Every college and every division of CAS has at least one eyebrow raising major.*
- *TA4: When considering in-state / resident students, which geographic areas of the state produce higher performing students? Similarly, which geographic areas don't produce high performing students? How does this production intersect with race and gender?*

All of these takeaways are couched in caveats and have various threats to their validity described in the manuscript. This is a technical report crunched out in a long holiday weekend by a single grad student without oversight, not a peer-reviewed multi-author article or heavily scrutinized doctoral dissertation. Take it with a grain of salt. I would love to learn from any thoughtful critique of the methodology or fact-based data which refutes the takeaways.

¹I haven't bothered citing related work in this report.

²I'm not afraid to swear, poke fun at admin, or break stupid rules.

1 Introduction

This document is a model and instructions for L^AT_EX. Please observe the conference page limits.

2 IRB Approval

IRB approval sure as hell wasn't sought for this technical report, for the following reasons:

1. IRB approval is an exercise in absurdity. See this Chronicle of Education article:
2. To get IRB approval at UO, you have to have a faculty member sign off on your research. I am not a faculty member. And I'm not about to drag a faculty member anywhere close to my political stunts (and this work, while undertaken to answer the research questions I have to my own satisfaction, is also an office politics stunt).
3. All data used in this research were openly and publicly available before any work began.
4. Given that the Office of the Provost is currently training machine learning models to identify individual students that are potentially at academic risk without IRB approval³, precedent has been set that internal institutional research aimed at improving student outcomes is exempt from IRB involvement. If enacting *Minority Report* via machine learning in real life for individual at-risk students doesn't need IRB approval, then this research certainly doesn't either. (And if the Office of the Provost has gotten IRB approval for *all* of their projects ahead of time, I'd love to be corrected! Of course, I don't think the Provost's office should seek IRB approval either – see point 1 about it being an exercise in absurdity – but there's something to be said about “Rules for thee but not for me!” from admin.)
5. Portland State's shameful investigation and embarrassing finding of “research misconduct” around Peter Boghossian's *Grievance Studies Affair* demonstrated that power structures in academia serve to reinforce and protect themselves at the expense of everyone else. In Boghossian's case, the only moral failing that occurred was the weaponisation of “research misconduct” by the university to punish an academic that made the ivory tower look bad, as does aspects of the research done in this technical report.

I refuse to spend my career looking over my shoulder, tiptoeing around, or otherwise placating others in a relentless search for Truth, even when that truth is uncomfortable or challenges deeply held assumptions. The only way to win is to not play. Further, the ethical position is to rebuke those which seek to derail the search for Truth under other guises. In this case, the appropriate ethical response should include the stripping of tenure of any faculty member (or the firing of an administrator) who would seek to outright censor or indirectly chill inquiry of this or similar work under pretense, including the pretense of “research misconduct.”

Lastly, it would be a mistake to think that by my general disdain for IRBs as they are currently constituted in universities across the US means that I argue against ethics in research. Quite the opposite. At a time when the value of higher education is increasingly questioned by large swaths of the American public, ethics in academic research has never been more important. Talk with me offline about how we can improve ethical conduct in research – it's not by pandering to (usually well meaning) bureaucrats in the IRB office or placating petty tyrants serving on an some committee/board sanctimoniously (self) tasked with determining the ethics of research with controversial conclusions during pearl clutching meetings.

3 RQ1: Grade Inflation

3.1 Methodology

The vast majority of student records are (rightly) protected under FERPA. But there is one publicly available data set which allows for independent analysis and inquiry related to this report's research questions: the Dean's Lists.

³<https://provost.uoregon.edu/analytics>

The Dean's List (sometimes called the Honor Roll) is an academic honor bestowed on undergraduate students at many universities, including at the University of Oregon. The criteria is usually simple: have a GPA for the term higher than some university-defined threshold. At the University of Oregon, that threshold has been a 3.75 GPA for students who took more than 15 credits (of which 12 must be graded) for at least a decade.

To further clarify, a student's term GPA is not their overall GPA. It's only the GPA they have for the classes the student took that term. For example, suppose a first year student flunked all their classes in Fall term, a total of 16 credits. This student would have a term GPA of 0.0 and an overall GPA of 0.0. The next term, the student really turned it around and earned As in all 16 credits. The student would have a term GPA of 4.0, would be on the Dean's List, and have an overall GPA of 2.0.

The Dean's List is published in the campus bulletin, *Around the O*, each term. The news article always reports the number of students that made the list, and the number of students enrolled that term.

We sought to find all the articles about the Dean's List for the past decade and determine what percentage of the student body made the Dean's List each term.

3.2 Results

With the exception of academic year 2015-2016⁴ we were able to obtain the number of undergraduate students that made the list, and the number of students enrolled that term.

Table 1: Number of students that made the Dean's List (i.e., had term GPAs of 3.75 or above) each term for the last decade. Included is the overall undergraduate enrollment for the term, and the percentage of students who made the Dean's list given overall enrollment.

Academic Year	Term	Count	Enrollment	%
2012-2013	Fall	1,538	20,467	8%
2012-2013	Winter	1,517	19,786	8%
2012-2013	Spring	1,352	19,233	7%
2013-2014	Fall	1,465	20,808	7%
2013-2014	Winter	1,543	19,724	8%
2013-2014	Spring	1,307	19,157	7%
2014-2015	Fall	1,420	20,254	7%
2014-2015	Winter	1,524	19,411	8%
2014-2015	Spring	1,376	18,904	7%
2015-2016	Fall	NA	NA	NA
2015-2016	Winter	NA	NA	NA
2015-2016	Spring	NA	NA	NA
2016-2017	Fall	1,628	19,778	8%
2016-2017	Winter	1,809	18,785	10%
2016-2017	Spring	1,575	18,206	9%
2017-2018	Fall	1,789	19,164	9%
2017-2018	Winter	1,965	18,252	11%
2017-2018	Spring	1,725	17,632	10%
2018-2019	Fall	2,003	18,927	11%
2018-2019	Winter	1,995	18,061	11%
2018-2019	Spring	1,855	17,407	11%
2019-2020	Fall	2,106	18,741	11%

⁴We believe academic year 2015-2016 corresponds to a year when there were some changes in the way *Around the O* was produced, which is why the Dean's List for that year was not available online. However, we are not completely sure of the reason it wasn't published. It could also be that the Dean's List simply didn't get compiled for 2015-2016 for some unknown reason.

Number of students that made the Dean's List (i.e., had term GPAs of 3.75 or above) each term for the last decade. Included is the overall undergraduate enrollment for the term, and the percentage of students who made the Dean's list given overall enrollment.

Table 1:

Academic Year	Term	Count	Enrollment	%
2019-2020	Winter	2,480	17,868	14%
2019-2020	Spring	3,401	17,117	20%
2020-2021	Fall	3,133	17,971	17%
2020-2021	Winter	2,710	17,057	16%
2020-2021	Spring	2,575	16,364	16%
2021-2022	Fall	4,442	18,490	24%
2021-2022	Winter	4,183	17,693	24%
2021-2022	Spring	3,811	16,922	23%

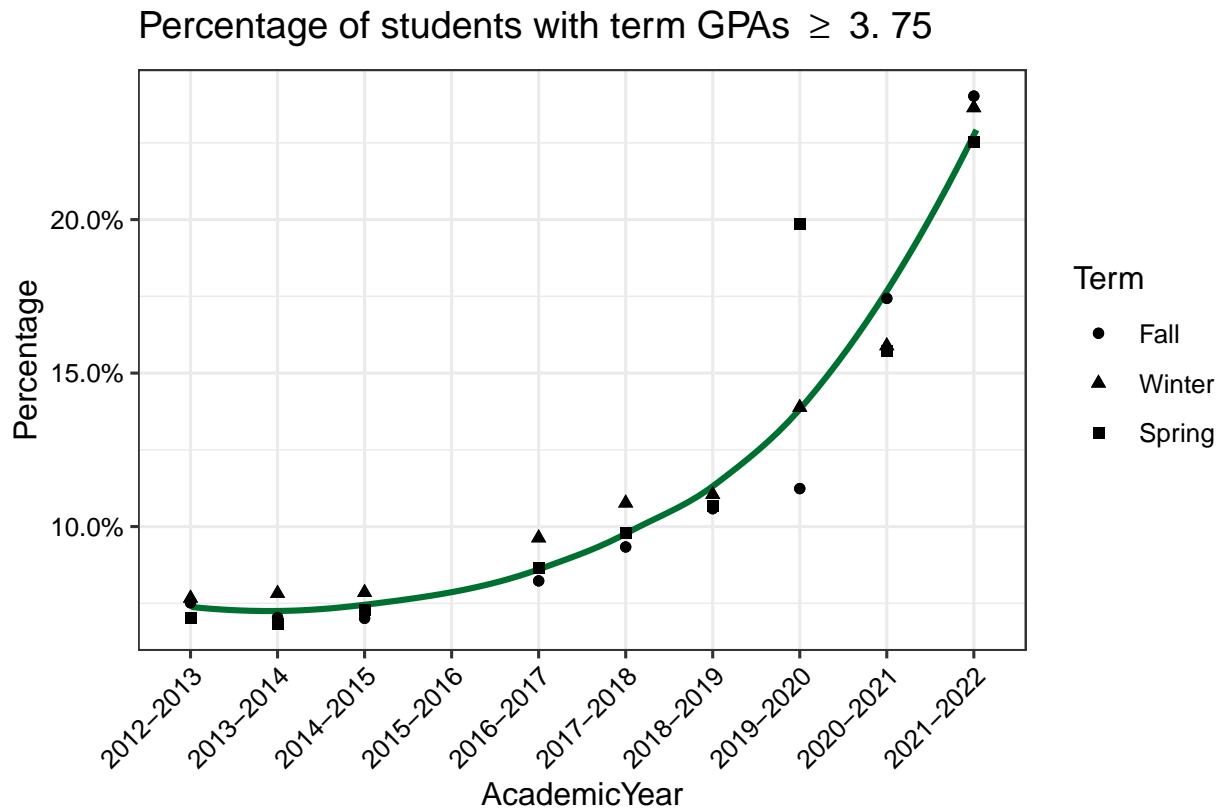


Figure 1: Percentage of all UO students on the Dean's List, which is essentially the percentage of full time students with term GPAs of 3.75 or above. Trendline fitted with LOESS in R (a type of local polynomial regression fitting).

3.3 Discussion, Threats to Validity, and Takeaways

Takeaway 1: The percentage of students on the Dean's List – essentially full time undergraduate students with more than 3.75 term GPAs – has increased from about 7% in Spring 2012 to 23% in Spring 2022.

Discussion and Threats to Validity: It could be tempting to look at this data and assert that grade inflation is the culprit. That is to say, professors/career instructors/graduate employees have become more lenient in their grading in the last few years. However, there are at least three points to consider which add complexity or outright rebuttal to this conclusion.

1. There may be a bimodal or multimodal separation of the GPA distribution data happening over time. That is to say, while there are more students meeting the 3.75 term GPA threshold today than in the past, other students might be failing or barely passing at greater rates, too. Without looking at the entire distribution of student grades over time, it's impossible to determine whether all students are seeing grade increases, if the "middle class" / B-range students are slowly disappearing to two sets of "A" students and "C/D/F" students, or some other phenomena is occurring. Since this GPA data is likely protected under law by FERPA, only UO itself – likely through the Office of the Provost – would be able to answer this question fully.
2. As UO's profile increases, we are attracting and admitting more prepared students. These students are then able to meet the bar for academic excellence, which then puts them on the Dean's List. Similarly, UO's initiatives for wrap-around student support means more students that would have previously been off the Dean's List are now on it.
3. Student grade grubbing is way up. Dealing with grade grubbing students is an emotional toll on the instructor. My sister-in-law is an English adjunct at a university in Texas. She got yet another nasty email from a student dissatisfied with his final grade on Christmas morning this last year. It takes an emotional toll to deal with these kinds of students, and I'm sure for some faculty there's a mental cost-benefit calculation done about the hassle of giving a lower grade for some students, especially if they feel unsupported and underpaid by the university.

So what are the drivers of this trend of more students making the Dean's List? Hard to definitively say. But some combination of the above three points is likely.

Moreover, it's important to note that the trend started before COVID hit. Fall 2019, with 11% of enrolled students on the Dean's List, was certainly higher than Fall 2012 at 8%. It's clear that the COVID years accelerated the trend, however. It will be interesting to see how Fall 2022 data compare.

Future work around this research question revolves around whether other universities have seen similar grade distribution changes as UO. While it may be tempting for some members of the university community to assign lower grades to combat perceived grade inflation, doing so will only put UO's students at a competitive disadvantage when they seek out employment or external scholarships if UO student grades are consistently lower than their peers from otherwise similar universities. Understanding how UO's grade distribution compares to peers is important to determine before policymakers (whether individual instructors or academic leadership) make changes.

4 RQ2: Are high performing students more likely to be Men or Women at UO?

4.1 Methodology

In addition to the *Around the O* articles about the Dean's List discussed in §3.1, the actual Dean's List itself is a searchable Microsoft Excel spreadsheet. All lists are published in *Around the O* or its archives from academic year 2012-2013 to 2021-2022, except for academic year 2015-2016 and Spring Term 2013. The list contains a student's first name, middle name, last name, major, home state, city, and zipcode. A student's gender is not included in the data.

To infer a student's gender, we employ `genderComputer`⁵, a tool used in previous peer reviewed research for inferring gender from names. Provided a name, it infers "Male," "Female," "Unisex," or "Unknown." The tool has a reported precision of 93%. We combine unisex and unknown into the same category for reporting purposes.

⁵<https://github.com/tue-mdse/genderComputer>

This gender inferment from the Dean's Lists is benchmarked against university-wide undergraduate gender enrollment ratios published at <https://provost.uoregon.edu/analytics/dashboards>, which is available only for Fall terms.

4.2 Results

Table 2: Gender distribution as a percentage of the Dean's List (i.e., had term GPAs of 3.75 or above) for each term with data. Missing entries indicate that the Dean's List was not available for that particular term. Rows may not sum to 100 due to rounding.

Academic Year	Term	Men	Women	Unknown
2012-2013	Fall	36%	56%	8%
2012-2013	Winter	37%	54%	9%
2012-2013	Spring			
2013-2014	Fall	39%	54%	7%
2013-2014	Winter	38%	55%	7%
2013-2014	Spring	37%	55%	7%
2014-2015	Fall	37%	55%	7%
2014-2015	Winter	38%	54%	8%
2014-2015	Spring	36%	55%	9%
2015-2016	Fall			
2015-2016	Winter			
2015-2016	Spring			
2016-2017	Fall	34%	57%	9%
2016-2017	Winter	33%	58%	9%
2016-2017	Spring	34%	58%	8%
2017-2018	Fall	35%	58%	7%
2017-2018	Winter	34%	58%	8%
2017-2018	Spring	34%	58%	8%
2018-2019	Fall	35%	58%	7%
2018-2019	Winter	36%	57%	7%
2018-2019	Spring	35%	57%	8%
2019-2020	Fall	36%	57%	7%
2019-2020	Winter	38%	55%	7%
2019-2020	Spring	37%	55%	8%
2020-2021	Fall	35%	58%	7%
2020-2021	Winter	35%	57%	8%
2020-2021	Spring	35%	57%	7%
2021-2022	Fall	38%	55%	7%
2021-2022	Winter	38%	55%	7%
2021-2022	Spring	38%	55%	7%

Table 3: Two-gender ratio of Dean’s List students (i.e., gender ratio with “Unknowns” excluded) compared with undergraduate enrollment by gender for the Fall enrollment census. Gender parity on the Dean’s List would mean that the gender ratios of the Dean’s List matched the gender ratios of overall enrollment. Missing entries indicate that the Dean’s List was not available for that particular term.

Academic Year	Term	Men’s Ratios		Women’s Ratios		Women’s Overrepresentation on Dean’s List
		<i>Dean’s List</i>	<i>Enrollment</i>	<i>Dean’s List</i>	<i>Enrollment</i>	
2012-2013	Fall	39%	46%	61%	54%	7%
2013-2014	Fall	42%	46%	58%	54%	4%
2014-2015	Fall	40%	46%	60%	54%	6%
2015-2016	Fall		44%		56%	
2016-2017	Fall	37%	45%	63%	55%	8%
2017-2018	Fall	38%	46%	62%	54%	8%
2018-2019	Fall	38%	46%	62%	54%	8%
2019-2020	Fall	39%	44%	61%	56%	5%
2020-2021	Fall	38%	43%	62%	57%	5%
2021-2022	Fall	41%	43%	59%	57%	2%

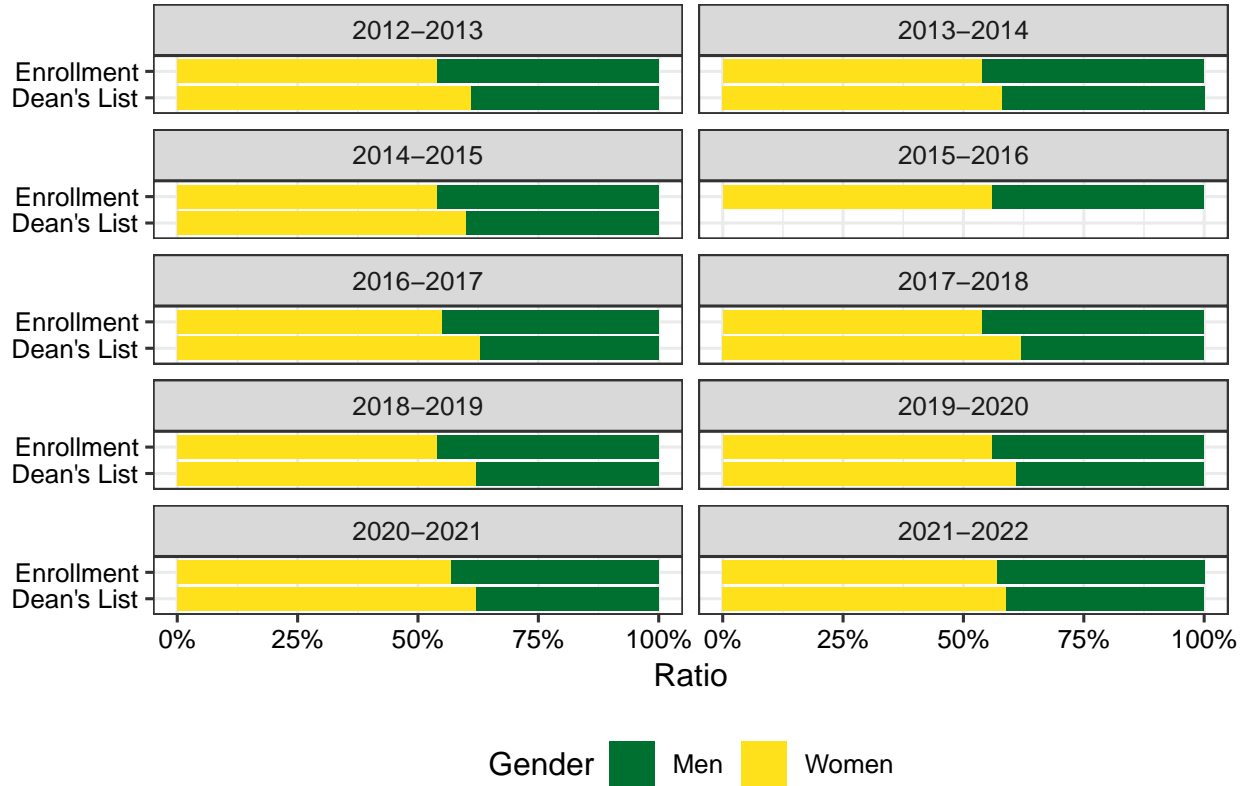


Figure 2: Visualization of men vs women ratios on the Dean’s List, compared with enrollment ratios for each Fall of the past 10 academic years. Women are consistently a greater percentage of students than men on the Dean’s List, even when considering their greater enrollment numbers. The Dean’s List for academic year 2015-2016 was not available online, which is why it’s missing.

4.3 Discussion, Threats to Validity, and Takeaways

Takeaway 2: Our results indicate that, for the last decade, women at UO are more likely than men to be on the Dean’s List. If one believes the Dean’s List to be an accurate set of UO’s top students, then these findings suggest women are more likely than men to be among the top academic performers at UO. On average, women are overrepresented among top performing students by an additional 6%, even when considering overall enrollment ratios. That is, 6% is the average of the “Women’s Overrepresentation on Dean’s List” column in Table 3).

Discussion and Threats to Validity:

There are at least two threats to the validity of these results.

1. The gender of each student is essentially an educated guess, not a self-report. To rectify this issue, the university would have to provide the self-identified gender data for each student on the various Dean’s Lists. This is possibly a FERPA violation.
2. Even with respect to UO’s own published data, gender identities besides man and woman (or sex categories male and female) are not included. Understanding how non-binary gender identities fall on this distribution is important future work.

Assuming that the true gender ratios of the Dean’s List closely mirror the results presented here, however, leads to the question, “*Well, why are these results the way they are? Is there bias against men at UO?*” Which is great future work for someone else to answer.

5 RQ3: Which majors produce students with higher GPAs?

5.1 Methodology

The ideal thing to do is get a list of enrollment by major for each term for the last decade and compare it with the number of students in each major on the Dean’s List.

Unfortunately, I cannot find such a list of enrollment by major by term for the last decade. What I can find are some data dashboards from the Office of the Provost⁶, Institutional Research⁷, and Registrar’s Office⁸. Neither of these websites have university wide major-specific data. But there is university-wide department-specific data. This is a subtle but important difference. As an illustrative example, the Department of Computer Science offers several majors: Computer Science, MACS (a Math + CS combo major), an accelerated BS+MS major, and so forth.

Moreover, one has to manually select the department to get the headcount. There’s no way to just download the data as a spreadsheet, and I’m not manually collecting 30 terms \times dozens of departments worth of enrollment data from obnoxious dropdown menus. It’s winter break; I want to drink eggnog and play board games with my family, not waste time scraping data for this side project.

So instead, we’re (1) aggregating the majors in the Dean’s Lists to determine the most common majors on the Dean’s List, (2) seeing if there’s a nice curve to the distribution of the data to determine if there’s an obvious elbow, and (3) comparing those frequently seen majors on the Dean’s List against departmental enrollment data.

The goal is to find outliers amongst the top-producing departments relative to their undergraduate enrollments. For example, we hypothesize that Psychology – long one of the most popular undergraduate majors, if not *the* most popular major – will show up in the list of most frequent majors on the Dean’s List. But, we want to control for student headcount, so we’ll divide by the Psychology department’s enrollment to get its overall Dean’s List production rate.

The result will be a short list where we can identify departments which (i) produce lots of Dean’s List students and (ii) produce them at a rate greater than would be expected given the size of their department.

⁶<https://provost.uoregon.edu/analytics/dashboards>

⁷<https://ir.uoregon.edu/students>

⁸<https://registrar.uoregon.edu/statistics/majors>

Further, to help benchmark, we'll (4) consider the *Dean's List / Departmental Enrollment* ratio of the median majors by overall Dean's List prevalence to help establish a baseline "typical" Dean's List production rate.

Lastly, we will also (5) list all majors by Dean's List production year-over-year and identify increases/decreases.

5.2 Results

Our methodology had five steps: (1) aggregate the majors in the Dean's Lists to determine the most common majors on the Dean's List, (2) see if there's a nice curve to the distribution of the data to determine if there's an obvious elbow, (3) compare those frequently seen majors on the Dean's List against departmental enrollment data, (4) consider the *Dean's List / Departmental Enrollment* ratio of the median majors by overall Dean's List prevalence to help establish a baseline "typical" Dean's List production rate, and (5) compare year-over-year figures.

We take each of these in turn.

5.2.1 Steps 1 and 2: Major aggregation and distribution analysis

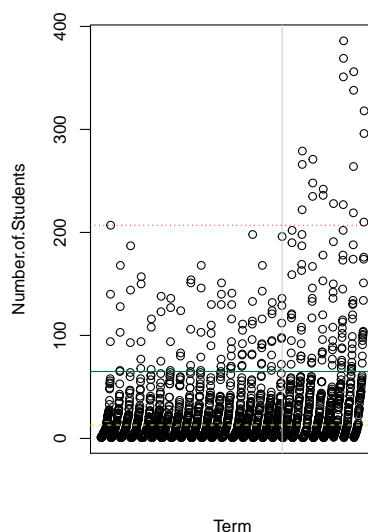


Figure 3: Each dot represents the number of students each major contributes to the Dean's List. Each roughly vertical line of dots represents an academic term in the last decade (four terms are missing due to missing data in academic year 2015-2016 and Spring 2013). The solid green horizontal line, which was arbitrarily placed, represents the 90th percentile or 65 students. This is to say that, across the last decade, 90% of all majors contribute fewer than 65 students to the Dean's List each term. 10% of majors contribute more than 65 students. The dashed yellow line is the median value, 13 students. While not in the methodology, we include a vertical gray line to denote the start of COVID (Winter 2020), and a red dotted line to indicate the most number of students a major ever produced on the Dean's List before COVID.

5.2.2 Steps 3: List of most frequently seen majors against enrollment data

There are 206 major-term points that have produced more than 65 students on the Dean's List since 2012. These are the points above the green line in Figure 3.

Majors which produced more than 65 students on the Dean's List at least once before Winter 2020:

- Accounting
- Biology
- Pre-Business Administration
- Business Administration
- Economics
- Educational Foundations
- Exploring / Undeclared
- General Social Science
- Human Physiology
- Jour:Advertising
- Jour:Public Relations
- Journalism
- Political Science
- Psychology

Majors which produced more than 65 students on the Dean's List at least once after or during Winter 2020 (Bolded majors are not on the Pre-COVID list.):

- **Art**
- Biology
- Pre-Business Administration
- Business Administration
- **Cinema Studies**
- **Communication Disorders and Sci**
- **Computer and Information Science**
- Economics
- Educational Foundations
- **English**
- **Environmental Science**
- **Environmental Studies**
- Exploring / Undeclared
- **Family and Human Services**
- General Social Science
- Human Physiology
- Jour:Advertising
- Jour:Public Relations
- Journalism
- Political Science
- Psychology
- **Sociology**

There are 20 majors-term points since COVID hit that have produced more Dean's List students than before COVID (which was 207 students in Fall 2012, majoring in "Undeclared/Exploring"). These are the points above the red dotted line in Figure 3. While all major-term points above the green line are suspect, the ones above the red are particularly noteworthy. Of those major-term points above the red line, there were only five majors:

- Pre-Business Administration
- Business Administration
- Psychology
- Political Science
- Undeclared / Exploring

Why haven't I pulled together the department data? I'm feeling lazy (and I promised in the abstract that this is a half-assed report), so I'm not finishing Step 3 or 4 and pulling down the data to cross compare

against department enrollments. Feel free to do that yourself: <https://provost.uoregon.edu/analytics/dashboards>

I did investigate almost all of the bolded majors in the list of post-COVID producers. In almost every case, total enrollment in these majors was either flat over the last decade or on the decline.

5.2.3 Steps 5: Compare year-over-year figures

Table 4: Pre-COVID and COVID Era comparison. The table is partitioned by majors which, on median, contributed more than 10 students to the Dean's List and those which contributed less. In the first section, rows are sorted by percentage of change. In the second section of majors which contributed 10 or fewer students, the rows are sorted by the numerical change.

Major	Students on Dean's List (Medians)		Change Since Covid Hit	
	F2016 to F2019	W2020 to S2021	Number	Percentage
Majors with more than 10 students (median) on the Dean's List from Fall 2016 to Fall 2019				
Business Administration	70	275	205	293%
Family and Human Services	14	52	38	271%
Product Design	13	40	27	208%
Jour:Advertising	60	160	100	167%
Music Performance	11	29	18	164%
Cinema Studies	23	58	35	152%
Jour:Public Relations	39	98	59	151%
Journalism	38	91	53	139%
Psychology	119	257	138	116%
Chemistry	12	26	14	117%
Music Education	11	23	12	109%
Political Science	81	165	84	104%
Art	29	56	27	93%
Educational Foundations	43	81	38	88%
Physics	14	27	13	93%
History	23	42	19	83%
Linguistics	12	22	10	83%
Environmental Science	23	41	18	78%
Biochemistry	22	39	17	77%
Environmental Studies	33	58	25	76%
Human Physiology	89	149	60	67%
General Social Science	31	52	21	68%
Architecture	23	39	16	70%
Art and Technology	21	35	14	67%
Anthropology	18	30	12	67%
Communication Disorders & Sci	30	47	17	57%
Sociology	32	49	17	53%
Biology	68	105	37	54%
Computer & Information Science	38	58	20	53%
Accounting	27	42	15	56%
General Science	12	17	5	42%
Philosophy	11	15	4	36%
Economics	42	54	12	29%
Exploring / Undeclared	149	189	40	27%
Mathematics	22	26	4	18%
Spanish	14	15	1	7%
English	54	57	3	6%
Pre-Journalism	51	52	1	2%

Table 4: Pre-COVID and COVID Era comparison. The table is partitioned by majors which, on median, contributed more than 10 students to the Dean's List and those which contributed less. In the first section, rows are sorted by percentage of change. In the second section of majors which contributed 10 or fewer students, the rows are sorted by the numerical change.

Major	Students on Dean's List (Medians)		Change Since Covid Hit	
	F2016 to F2019	W2020 to S2021	Number	Percentage
Pre-Business Administration	122	119	-3	-2%
Theater Arts	14	14	0	0%
Music	36	31	-5	-14%
International Studies	20	17	-3	-15%
Pre-International Studies	29	8	-21	-72%
Pre-Education	27	0	-27	-100%
Pre-Family and Human Services	15	0	-15	-100%
Majors with 10 or fewer students (median) on the Dean's List from Fall 2016 to Fall 2019				
Pre-Global Studies	0	23	23	NA
Marine Biology	10	26	16	160%
Pre-J:Advertising	8	22	14	175%
Global Studies	0	12	12	NA
Neuroscience	0	12	12	NA
Pre-Planning Public Policy Mgm	8	19	11	138%
Pre-J:Public Relations	3	14	11	367%
Planning Public Policy & Mgmt	8	17	9	113%
Earth Sciences	3	9	6	200%
Women's Gendr & Sexuality St	1	7	6	600%
Mathematics & Computer Science	4	10	6	150%
Pre-J:Media Studies	1	7	6	600%
Data Science	0	6	6	NA
Dance	4	9	5	125%
Geography	7	11	4	57%
Spatial Data Sci & Technology	2	6	4	200%
Ethnic Studies	4	8	4	100%
Art History	3	6	3	100%
Chinese	3	6	3	100%
Pre-Landscape Architecture	0	3	3	NA
Asian Studies	3	5	2	67%
Comparative Literature	5	6	1	20%
Classics	2	4	2	100%
Music Composition	2	3	1	50%
Humanities	3	4	1	33%
Religious Studies	1	2	1	100%
Folklore and Public Culture	0	1	1	NA
Italian	0	1	1	NA
Latin American Studies	0	1	1	NA
French	2	3	1	50%
Landscape Architecture	1	1	0	0%
Medieval Studies	1	1	0	0%
Music: Jazz Studies	7	7	0	0%
Jour:Media Studies	6	6	0	0%
Arts Management	0	0	0	0%
Ceramics	0	0	0	0%
Communication Disorders and Sciences	0	0	0	0%
Fibers	0	0	0	0%
Folklore	0	0	0	0%
Jour:Communication Studies	0	0	0	0%

Table 4: Pre-COVID and COVID Era comparison. The table is partitioned by majors which, on median, contributed more than 10 students to the Dean's List and those which contributed less. In the first section, rows are sorted by percentage of change. In the second section of majors which contributed 10 or fewer students, the rows are sorted by the numerical change.

Major	Students on Dean's List (Medians)		Change Since Covid Hit	
	F2016 to F2019	W2020 to S2021	Number	Percentage
Journalism: Advertising	0	0	0	0%
Journalism: Media Studies	0	0	0	0%
Journalism: Public Relations	0	0	0	0%
Judaic Studies	0	0	0	0%
Metalsmithing and Jewelry	0	0	0	0%
Multidisciplinary Science	0	0	0	0%
Music: Pre Teacher Licensure	0	0	0	0%
Painting	0	0	0	0%
Photography	0	0	0	0%
Planning Public Policy & Management	0	0	0	0%
Pre-J:Communication Studies	0	0	0	0%
Pre-Journalism: Advertising	0	0	0	0%
Pre-Journalism: Communication Studies	0	0	0	0%
Pre-Journalism: Public Relations	0	0	0	0%
Pre-Marine Biology	0	0	0	0%
Pre-Planning Public Policy and Management	0	0	0	0%
Printmaking	0	0	0	0%
Russ E Euro & Eurasia Studies	0	0	0	0%
Russian & East Europe Studies	0	0	0	0%
Russian East European and Eurasian Studies	0	0	0	0%
Sculpture	0	0	0	0%
Unclassified/Continuing Educ	0	0	0	0%
Interior Architecture	4	3	-1	-25%
German	2	2	0	0%
Pre-Engineering	1	0	-1	-100%
Romance Languages	5	4	-1	-20%
National Student Exchange	1	0	-1	-100%
Japanese	8	6	-2	-25%
Women's and Gender Studies	2	0	-2	-100%
Geological Sciences	3	0	-3	-100%
Digital Arts	6	0	-6	-100%
Material & Product Studies	9	0	-9	-100%

Table 5: Term-over-Term comparison. The table is partitioned by majors which, on median, contributed more than 10 students to the Dean's List and those which contributed less. In the first section, rows are sorted by percentage of change. In the second section of majors which contributed 10 or fewer students, the rows are sorted by the numerical change.

Term (F:Fall, W:Winter, S:Spring)	2016-2017			2017-2018			2018-2019			2019-2020			2020-2021			2021-2022		
Major	F	W	S	F	W	S	F	W	S	F	W	S	F	W	S	F	W	S
Majors with more than 10 students (median) on the Dean's List from Fall 2016 to Fall 2019																		
Pre-COVID																		
Business Administration	49	50	42	63	68	71	111	116	124	136	202	279	271	236	228	386	338	296
Family and Human Services	13	9	15	16	11	18	22	8	20	38	60	57	40	46	57	68	45	45
Product Design	5	7	4	8	15	10	34	28	39	25	28	33	44	25	35	52	49	59
Jour:Advertising	39	57	51	41	70	70	56	72	66	63	95	169	133	120	150	173	188	176
Music Performance	2	4	2	11	11	6	16	20	19	26	21	25	23	29	30	38	33	29
Cinema Studies	21	17	25	23	16	24	23	25	41	56	50	60	55	36	76	65	80	80
Jour:Public Relations	28	41	40	24	37	40	25	39	39	53	72	108	73	82	95	115	116	100
Journalism	16	41	40	28	40	28	36	43	42	34	53	92	74	76	89	107	130	134
Psychology	106	103	102	140	116	92	133	143	121	129	159	266	242	191	351	356	318	318
Chemistry	15	9	6	17	10	9	20	10	14	16	19	23	29	16	22	41	34	34
Music Education	7	11	3	11	10	6	24	22	18	22	23	18	22	14	20	36	27	37
Political Science	56	66	59	77	94	81	82	88	81	112	117	163	167	153	142	227	219	210
Art	22	26	19	28	37	29	25	32	37	39	50	59	52	44	48	98	92	98
Educational Foundations	25	62	37	37	80	56	48	61	37	29	45	23	78	84	71	113	120	103
Physics	15	13	11	10	15	13	16	18	8	15	18	16	34	19	17	37	36	39
History	20	19	21	24	23	25	26	22	20	24	28	39	43	41	29	53	61	55
Linguistics	11	11	12	9	12	4	19	15	17	24	15	17	23	21	14	31	30	26
Environmental Science	20	20	16	26	22	19	23	27	23	32	32	36	40	41	31	68	53	57
Biochemistry	21	21	20	26	19	13	27	22	22	31	25	40	42	21	24	45	42	37
Environmental Studies	30	26	22	38	31	26	35	41	34	40	58	56	57	55	44	87	87	91
Human Physiology	71	79	90	70	87	82	96	91	94	98	120	198	146	106	108	202	174	151
General Social Science	20	31	26	31	51	34	34	43	29	27	47	77	58	39	35	51	67	53
Architecture	20	22	6	24	30	13	31	28	12	31	30	28	37	41	25	49	55	40
Art and Technology	4	11	21	14	20	21	27	21	27	30	30	39	29	27	31	52	49	54
Anthropology	13	23	19	23	17	19	15	16	16	21	28	32	26	26	27	50	53	50
Communication Disorders & Sci	42	30	27	24	25	32	32	30	27	29	38	36	47	55	45	71	68	46
Sociology	23	33	26	30	39	27	34	30	34	33	31	47	51	42	45	61	74	61
Biology	65	53	45	65	70	59	81	73	70	97	83	105	136	96	86	178	134	104
Computer & Information Science	35	30	25	36	42	41	39	43	35	50	49	60	56	32	32	88	81	73
Accounting	29	33	26	21	27	24	22	28	28	27	41	80	33	37	50	39	45	42
General Science	8	11	13	13	12	15	12	14	8	7	16	18	14	19	18	10	10	5
Philosophy	4	9	8	7	11	16	16	16	11	12	12	12	17	13	10	30	23	22
Economics	40	50	42	41	40	49	42	60	45	33	51	80	47	43	39	74	70	56
Exploring / Undeclared	154	146	110	151	130	105	198	168	132	196	190	187	235	178	136	369	264	174
Mathematics	18	26	21	22	20	22	19	23	22	20	23	31	10	12	11	37	28	39
Spanish	13	15	14	13	18	15	16	13	9	13	13	15	15	20	12	23	17	13
English	63	64	56	57	54	44	53	37	30	54	59	54	52	55	46	102	99	95
Pre-Journalism	49	47	34	60	62	52	57	49	32	54	50	55	60	35	32	53	61	45
Pre-Business Administration	151	168	130	130	141	111	114	92	95	72	121	222	117	84	77	145	131	101
Theater Arts	14	9	14	13	15	14	17	14	16	11	14	13	10	12	15	18	19	13
Music	32	40	39	40	40	45	23	28	12	16	17	23	28	25	34	41	35	42
International Studies	13	16	26	17	23	21	19	16	22	25	19	20	22	20	12	15	11	7
Pre-International Studies	22	29	23	29	29	34	23	28	34	40	35	51	28	10	3	6	0	1
Pre-Education	25	30	32	29	34	20	23	32	23	29	37	0	0	0	0	0	0	0
Pre-Family and Human Services	12	22	20	14	16	16	16	11	14	11	0	0	0	0	0	0	0	0
Majors with 10 or fewer students (median) on the Dean's List from Fall 2016 to Fall 2019																		
Pre-COVID																		
Pre-Global Studies	0	0	0	0	0	0	0	0	0	0	0	0	23	21	22	34	35	29
Marine Biology	10	6	9	11	8	7	14	8	11	16	11	10	31	16	20	41	36	39
Pre-J:Advertising	7	4	10	8	11	6	8	11	11	18	45	30	17	15	23	21	27	27
Global Studies	0	0	0	0	0	0	0	0	0	0	0	0	1	10	14	23	28	
Neuroscience	0	0	0	0	0	0	0	0	0	0	0	0	4	13	11	36	41	
Pre-Planning Public Policy Mgm	8	6	5	8	8	9	13	11	13	7	12	20	18	18	33	36	24	24
Pre-J:Public Relations	4	3	2	0	2	3	3	6	4	10	5	19	19	15	21	10	10	13
Planning Public Policy & Mgmt	7	11	7	6	8	6	11	7	16	19	8	15	16	28	34	43	43	43
Earth Sciences	0	1	0	4	4	4	2	5	1	6	8	10	8	1	4	11	11	13
Women's Gender & Sexuality St	0	0	0	0	1	1	3	2	2	4	4	7	7	3	4	11	11	11
Mathematics & Computer Science	4	3	1	6	4	3	3	4	4	5	3	9	10	9	16	14	11	11
Pre-J:Media Studies	0	1	0	1	0	2	0	1	2	5	8	7	6	7	3	8	4	4
Data Science	0	0	0	0	0	0	0	0	0	0	0	0	1	6	5	16	13	13
Dance	4	2	4	1	2	3	3	4	5	6	8	10	9	10	4	7	6	10
Geography	4	4	5	5	11	6	7	7	9	7	13	8	11	5	10	13	15	15
Spatial Data Sci & Technology	0	0	0	2	2	4	5	2	3	3	4	8	4	4	5	10	7	9
Ethnic Studies	2	3	4	5	2	6	4	1	5	5	8	15	7	7	11	14	7	7
Art History	5	3	5	3	3	1	2	4	3	3	5	5	3	3	7	11	9	13

Table 5: Term-over-Term comparison. The table is partitioned by majors which, on median, contributed more than 10 students to the Dean's List and those which contributed less. In the first section, rows are sorted by percentage of change. In the second section of majors which contributed 10 or fewer students, the rows are sorted by the numerical change.

Academic Year	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Chinese	6	7	2	1	4	6
Pre-Landscape Architecture	0	0	0	0	3	2
Asian Studies	5	3	2	2	4	3
Comparative Literature	3	6	4	2	1	3
Classics	1	2	2	2	2	3
Music Composition	3	1	0	2	3	3
Humanities	5	4	1	3	2	1
Religious Studies	1	1	2	2	3	1
Folklore and Public Culture	0	0	0	0	2	1
Italian	0	0	0	1	1	1
Latin American Studies	1	0	0	0	1	0
French	2	1	2	3	4	2
Landscape Architecture	4	0	1	0	0	1
Medieval Studies	0	2	0	3	1	6
Music: Jazz Studies	6	5	6	7	7	7
Jour:Media Studies	3	2	4	5	7	6
Arts Management	0	2	0	1	3	2
Ceramics	1	0	0	0	0	0
Communication Disorders and Sciences	0	0	0	0	0	0
Fibers	0	0	0	0	0	0
Folklore	0	0	0	1	1	0
Jour:Communication Studies	0	0	0	0	0	0
Journalism: Advertising	0	0	0	0	0	0
Journalism: Media Studies	0	0	0	0	0	0
Journalism: Public Relations	0	0	0	0	0	0
Judaic Studies	0	0	0	0	0	0
Metalsmithing and Jewelry	0	0	0	0	0	0
Multidisciplinary Science	0	0	0	0	0	0
Music: Pre Teacher Licensure	0	0	0	0	0	0
Painting	1	0	0	1	0	0
Photography	0	1	0	0	0	0
Planning Public Policy & Management	0	0	0	0	0	0
Pre-J:Communication Studies	0	0	0	0	0	0
Pre-Journalism: Advertising	0	0	0	0	0	0
Pre-Journalism: Communication Studies	0	0	0	0	0	0
Pre-Journalism: Public Relations	0	0	0	0	0	0
Pre-Marine Biology	0	0	0	0	0	0
Pre-Planning Public Policy and Management	0	0	0	0	0	0
Printmaking	1	0	0	1	2	4
Russ E Euro & Eurasia Studies	0	0	0	0	0	0
Russian & East Europe Studies	0	0	0	0	0	0
Russian East European and Eurasian Studies	0	0	0	0	0	0
Sculpture	0	0	0	0	0	0
Unclassified/Continuing Educ	0	0	0	0	0	0
Interior Architecture	8	5	2	4	2	0
German	2	1	5	4	3	2
Pre-Engineering	5	5	2	1	2	1
Romance Languages	3	7	5	8	4	8
National Student Exchange	4	1	1	2	0	0
Japanese	4	13	7	10	10	8
Women's and Gender Studies	3	4	1	2	2	1
Geological Sciences	3	6	3	4	3	2
Digital Arts	5	12	9	6	6	7
Material & Product Studies	20	14	10	13	8	10

5.3 Discussion, Threats to Validity, and Takeaways

Discussion and Threats to Validity: Determining which majors produce students with high GPAs is messy to impossible with the data available to the authors. Different approaches result in different insights, and there are a lot of nuances based on how majors are structured and recorded. This is particularly true amongst majors which have a “Pre” component (e.g., Pre-Journalism or Pre-Business Administration), which may have a very rigorous “Pre” curriculum which weeds out some students, followed by a more relaxed major (or simply more prepared students).

Nevertheless, there is something to be said about those majors which seem to appear over and over on the Dean’s List, regardless of methodology, which brings us to a takeaway.

Takeaway 3: These majors each produced more than 65 Dean’s List students during at least one term since Winter Term 2020 and have also more than doubled their number of students on the list since pre-COVID times. A major’s percentage increase in Dean’s List students compared to pre-COVID times is in parentheses:

- Business Administration (293%)
- Cinema Studies (152%)
- Family and Human Services (271%)
- Jour: Advertising (167%)
- Jour: Public Relations (151%)
- Journalism (139%)
- Political Science (104%)
- Psychology (116%)

6 RQ4: When considering in-state / resident students, which geographic areas of the state produce higher performing students? Similarly, which geographic areas don’t produce high performing students? How does this production intersect with race and gender?

6.1 Methodology

1. Partition Dean’s List data by Oregon ZIP codes. Focus on in-state students for the rest of this analysis.
2. The same student can be on the Dean’s List for multiple terms. Consolidate the individuals on multiple Dean’s Lists by the following criteria: A student on list L_i is considered to be the same individual as a student on list L_j if both students have (1) the same name and (2) the same ZIP code.⁹
3. Using the `genderComputer` tool, infer a gender for each student.
4. Aggregate students by ZIP code. Provide a two-gender split for each ZIP code as follows:
 - (a) Each ZIP code will have three numbers: Population of Men, Women, Unknown. Call these numbers m , w , u . Total population per ZIP code is $t = m + w + u$.
 - (b) Let the approximate number of women by ZIP code be $W = \frac{w}{m+w} \cdot t$ and let the approximate number of men by ZIP code be $M = \frac{m}{m+w} \cdot t$.
 - (c) Round W and M to the nearest integer for the approximate two-gender split per ZIP code.
5. Get population data from 2020 for teenagers (who are now traditional college age) by ZIP code from the US Census Bureau.
 - (a) Stratify by overall population density

⁹Changes in majors, such as “Exploring/Undeclared” to something else, is too common and messy to be a reliable index for this quick-and-dirty “get the gist” technical report.

- (b) Stratify by youth population density
 - (c) Stratify by youth sex
 - (d) Stratify by youth race, done as follows:
 - i. Consider the total population.
 - ii. Consider the white alone, non-Hispanic population.
 - iii. Consider the people of color population, defined as the total population minus the white alone, non-Hispanic population.
6. Plot various maps comparing these stratified data and identify any trends.
7. If possible, overlay ZIP code data with school district boundaries. Identify which schools or districts are under or over producing top students relative to norms.