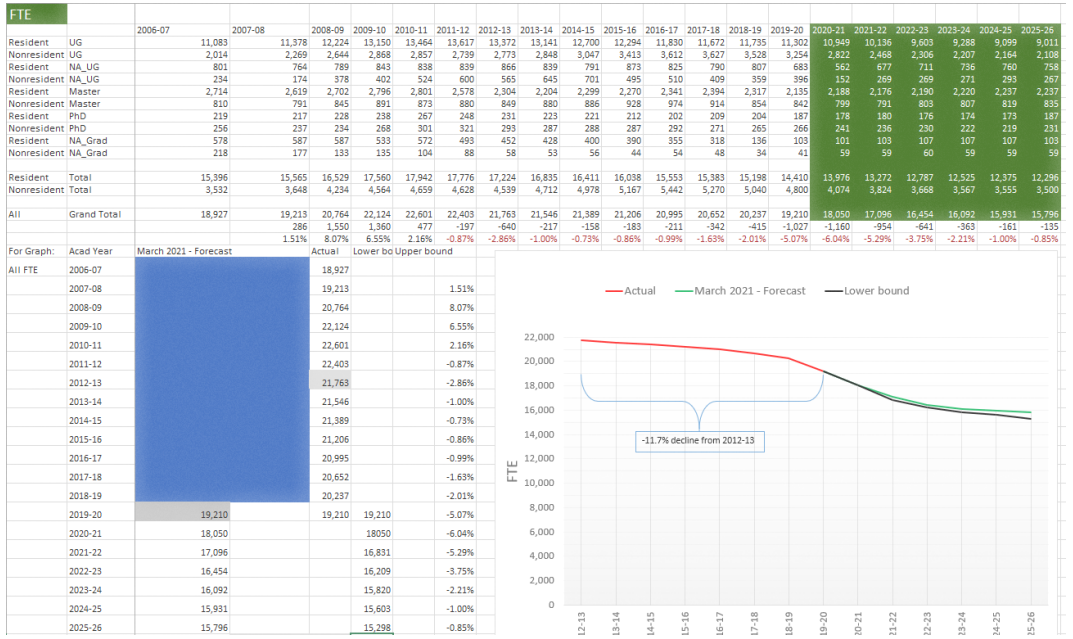
Portland State UNIVERSITY

OFFICE OF INSTITUTIONAL RESEARCH AND PLANNING

Enrollment Forecast Annual FTE Model



FTE

		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Resident	UG	11,083	11,378	12,224	13,150	13,464	13,617	13,372	13,141	12,700	12,294	11,830	11,672	11,735	11,302	10,949	10,136	9,603	9,288	9,099	9,011
Nonresident	UG	2,014	2,269	2,644	2,868	2,857	2,739	2,773	2,848	3,047	3,413	3,612	3,627	3,528	3,254	2,822	2,468	2,306	2,207	2,164	2,108
Resident	NA_UG	801	764	789	843	838	839	866	839	791	873	825	790	807	683	562	677	711	736	760	758
Nonresident	NA_UG	234	174	378	402	524	600	565	645	701	495	510	409	359	396	152	269	269	271	293	267
Resident	Master	2,714	2,619	2,702	2,796	2,801	2,578	2,304	2,204	2,299	2,270	2,341	2,394	2,317	2,135	2,188	2,176	2,190	2,220	2,237	2,237
Nonresident	Master	810	791	845	891	873	880	849	880	886	928	974	914	854	842	799	791	803	807	819	835
Resident	PhD	219	217	228	238	267	248	231	223	221	212	202	209	204	187	178	180	176	174	173	187
Nonresident	PhD	256	237	234	268	301	321	293	287	288	287	292	271	265	266	241	236	230	222	219	231
Resident	NA_Grad	578	587	587	533	572	493	452	428	400	390	355	318	136	103	101	103	107	107	107	103
Nonresident	NA_Grad	218	177	133	135	104	88	58	53	56	44	54	48	34	41	59	59	60	59	59	59
Resident	Total	15,396	15,565	16,529	17,560	17,942	17,776	17,224	16,835	16,411	16,038	15,553	15,383	15,198	14,410	13,976	13,272	12,787	12,525	12,375	12,296
Nonresident	Total	3,532	3,648	4,234	4,564	4,659	4,628	4,539	4,712	4,978	5,167	5,442	5,270	5,040	4,800	4,074	3,824	3,668	3,567	3,555	3,500
All	Grand Total	18,927	19,213	20,764	22,124	22,601	22,403	21,763	21,546	21,389	21,206	20,995	20,652	20,237	19,210	18,050	17,096	16,454	16,092	15,931	15,796
			286	1,550	1,360	477	-197	-640	-217	-158	-183	-211	-342	-415	-1,027	-1,160	-954	-641	-363	-161	-135
			1.51%	8.07%	6.55%	2.16%	-0.87%	-2.86%	-1.00%	-0.73%	-0.86%	-0.99%	-1.63%	-2.01%	-5.07%	-6.04%	-5.29%	-3.75%	-2.21%	-1.00%	-0.85%

For Graph:	Acad Year	March 2021 - Forecast	Actual	Lower bo	Upper bound	
All FTE	2006-07		18,927			
	2007-08		19,213			1.51%
	2008-09		20,764			8.07%
	2009-10		22,124			6.55%
	2010-11		22,601			2.16%
	2011-12		22,403			-0.87%
	2012-13		21,763			-2.86%
	2013-14		21,546			-1.00%
	2014-15		21,389			-0.73%
	2015-16		21,206			-0.86%
	2016-17		20,995			-0.99%
	2017-18		20,652			-1.63%
	2018-19		20,237			-2.01%
	2019-20	19,210	19,210	19,210		-5.07%
	2020-21	18,050		18050		-6.04%
	2021-22	17,096		16,831		-5.29%
	2022-23	16,454		16,209		-3.75%
	2023-24	16,092		15,820		-2.21%
	2024-25	15,931		15,603		-1.00%
	2025-26	15,796		15,298		-0.85%

David Burgess, Director – OIRP, 5-3434

November 01, 2023

Topics

- Enrollment modeling at PSU
- Documentation
- Historic accuracy of the annual FTE model
- Enrollment context
- Full-time equivalent (FTE) defined, (example of documentation)
- Method: modified Markov
- Sources of data and information
- Process method

Model Accuracy: 7-year look back

Office of Institutional Research and Planning
6/28/2023

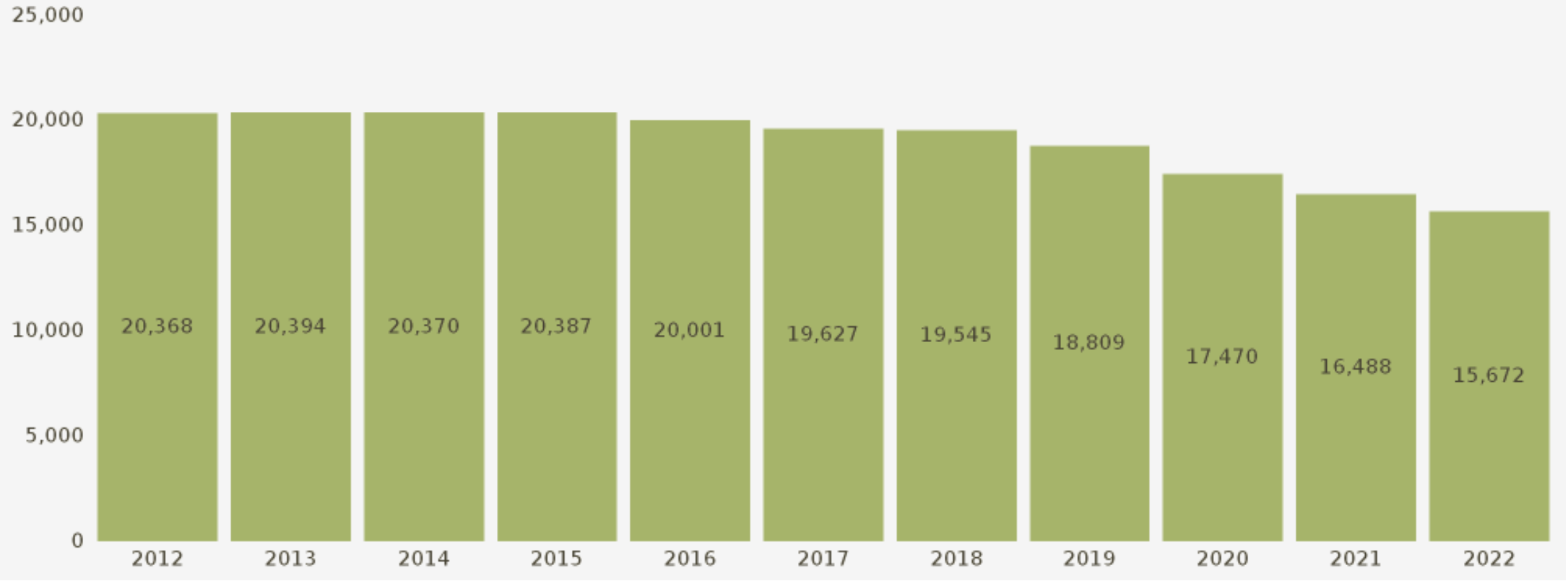
Actual FTE Compared To Estimated Annual FTE

Acad. Year*	Actual FTE	Est FTE	Actual from est
2017-2018	20,653	20,438	1.0%
2018-2019	20,237	20,744	-2.4%
2019-2020	19,210	20,210	-4.9%
2019-2020 revised**		19,848	
2020-2021	18,016	18,311	-1.6%
2021-2022	16,827	17,096	-1.6%
2022-2023 (Goal)	*16,029*	*16,656*	*-3.8%*
2022-2023 (Base)	16,029	16,414	-2.3%
2023-2024 (Base)		15,329	--

*summer through spring term

**revised July 2019 to reflect the unanticpated decline in summer 2019 enrollment

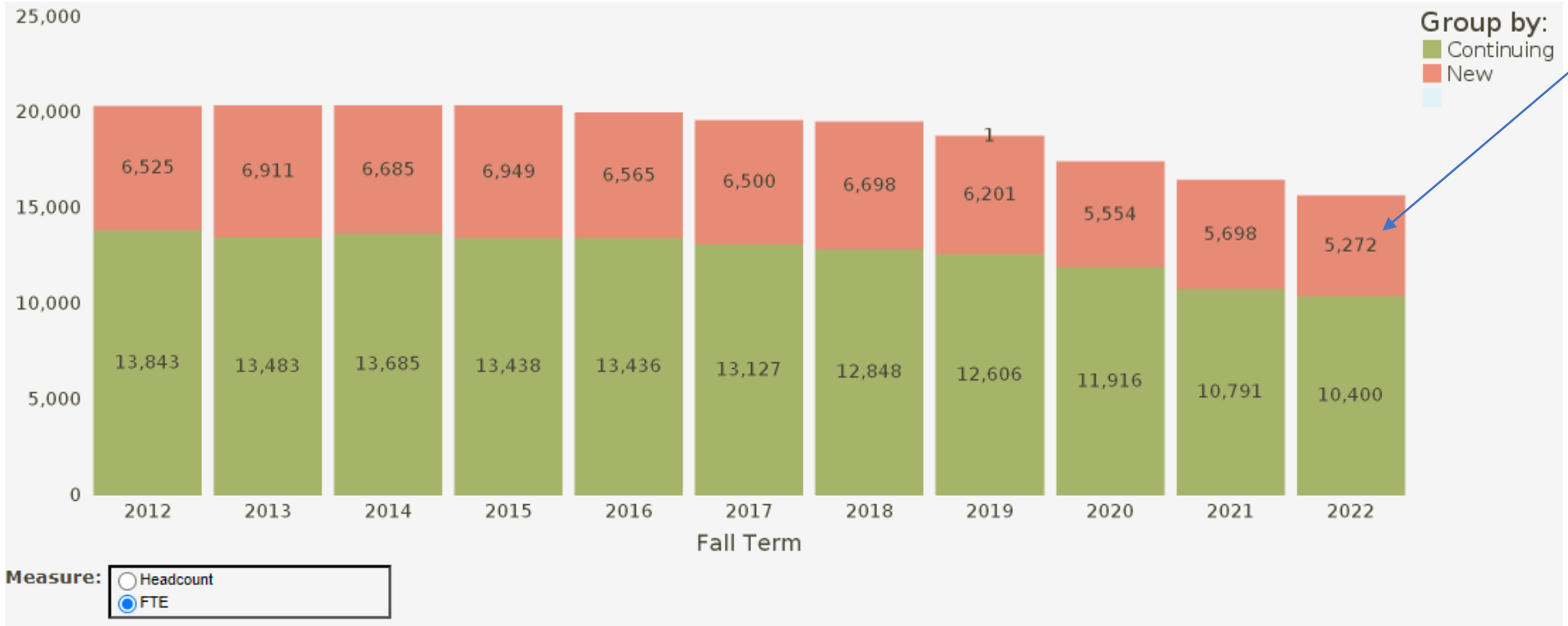
Enrollment Context: Historic Fall Term FTE



2012 to 2022: 23% decline in over-all FTE

[Cognos Report: Fall Term Headcount Trends]

Context: enrollment trends and forecasting



At PSU new enrollment comprises of about 1/3 of the enrollment for fall terms; other terms it is substantially less, (about 10%)

Two things to notice:

1) continuing enrollment provides a very large and relatively stable population to model

1) the relative magnitude of the new enrollment tampers its influence on overall enrollment

[Datamaster Report: Fall Term Headcount Trends]

Markov Method

Markov property -- In a very informal way, the Markov property says, for a random process, that if we know the value taken by the process at a given time, we won't get any additional information about the future behaviour of the process by gathering more knowledge about the past.

Markov Method

*Stated in slightly more mathematical terms, for any given time, the conditional distribution of future states of the process given present and past states depends only on the present state and not at all on the past states. ***

** Introduction to Markov chains
Definitions, properties and PageRank example.
Joseph Rocca, Feb 24, 2019 – Towards Data Science - Blog Post

Markov Method

OIRP's model is a modified Markov chain in that the default state is the "Markov property" but in recognition that much of what is being modeled is not constant; we adjust the model with additional information and factors.

Markov Method

Example

If we know that there was an anomaly in enrollment from a prior time period, (state), then we factor that in for future enrollment. The abrupt change caused by covid restrictions is a factor that we considered.

Method: General assumptions of Markov Models

- Finite number of discrete categories
- Condition at Time 2 depends on..
  - condition at Time 1
  - transition probability
- Time periods of equal duration
- Transition probabilities are constant over time period considered

Method: More information

Donhardt, G.L. (1995).

Tracking student enrollments using the Markov chain, comprehensive tool for enrollment management.

Journal of College Student Development, 36(5), 457-462.

I. The first step is to develop the transition matrix.

1. Start by inserting the most recent* official enrollment figures available.

Modeling Enrollment for Fall 2000 and Beyond

Fall 1998

Student Level	FT Fresh.	Fresh.	Soph.	Junior	Senior	UPB	NU	GM	GD	GPB	NG	*total*
4th week data →	**1,017**	**701**	**1,710**	**2,625**	**3,183**	**514**	**1,110**	**2,559**	**358**	**531**	**922**	**15230**

Developing the transition matrix.

2. Enter in the number of "new" students. These are students who were not enrolled at the institution the previous fall term.

Modeling Enrollment for Fall 2000 and Beyond

students entering the system

Fall 1998

			FT Fresh.	Fresh.	Soph.	Junior	Senior	UPB	NU	GM	GD	GPB	NG
			1,017	701	1,710	2,625	3,183	514	1,110	2,559	358	531	922
Fall	FT Freshmen	**1,110**											
1999	Con. Freshmen	**337**											
	Sophomore	**936**											
	Junior	**1,461**											
	Senior	**682**											
	UPB	**333**											
	NU	**1,114**											
	GM	**1,344**											
	GD	**112**											
	GPB	**330**											
	NG	**768**											
total students entering		**8,527**											

Developing the transition matrix.

3. Enter in the fall 1999 enrollment figures, by student level, for only those students who were enrolled in fall 1998. Check for funny numbers. Ex. FT fresh in 98 -- GM in 99.
(Notice the additional two status cells *'degree granted & 'dropout/stopout'*)

Modeling Enrollment for Fall 2000 and Beyond

Enter in status of the fall 98 students

			Fall 1998									
			FT Fresh.	Fresh.	Soph.	Junior	Senior	UPB	NU	GM	GD	GPB	NG
			1,017	701	1,710	2,625	3,183	514	1,110	2,559	358	531	922
Fall	FT Freshmen	1,110											
1999	Con. Freshmen	337	**310**	**37**					**23**				
	Sophomore	936	**284**	**316**	**215**				**32**				**1**
	Junior	1,461	**4**	**52**	**859**	**428**	**1**		**37**				
	Senior	682		**8**	**122**	**1,440**	**1,036**		**34**				**1**
	UPB	333					**2**	**187**	**10**	**5**		**35**	**22**
	NU	1,114	**1**			**1**			**120**				
	GM	1,344		**1**		**1**	**5**	**35**	**31**	**1,134**	**1**	**83**	**111**
	GD	112								**6**	**244**	**1**	**1**
	GPB	330		**1**		**1**	**1**	**1**	**9**		**1**	**88**	**22**
	NG	768					**2**						**111**
	degree granted				**1**	**179**	**1577**	**70**	**5**	**850**	**42**	**40**	**5**
	dropout/stopout		**418**	**286**	**513**	**575**	**559**	**221**	**810**	**564**	**70**	**284**	**647**

Developing the transition matrix.

4. Calculate the total fall 1999 enrollment by level by adding across rows. The total enrollment should equal the actual fall 1999 enrollment.

Modeling Enrollment for Fall 2000 and Beyond

			Fall 1998											
			Fresh.	Fresh.	Soph.	Junior	Senior	UPB	NU	GM	GD	GPB	NG	
			1,017	701	1,710	2,625	3,183	514	1,110	2,559	358	531	922	
Fall	FT Freshmen	1,110	**Add across** →											**1,110**
1999	Con. Freshme	337	310	37					23					**707**
	Sophomore	936	284	316	215				32				1	**1,784**
	Junior	1,461	4	52	859	428	1		37					**2,842**
	Senior	682		8	122	1,440	1,036		34				1	**3,323**
	UPB	333					2	187	10	5		35	22	**594**
	NU	1,114	1			1			120					**1,236**
	GM	1,344		1		1	5	35	31	1,134	1	83	111	**2,746**
	GD	112								6	244	1	1	**364**
	GPB	330		1		1	1	1	9		1	88	22	**454**
	NG	768					2						111	**881**
	degree granted				1	179	1577	70	5	850	42	40	5		2,769
	dropout/stopout		418	286	513	575	559	221	810	564	70	284	647		4,947
											Total Fall 1999 enrollment			**16,041**

Developing the transition matrix.

5. a. Calculate the probability matrix.

Modeling Enrollment for Fall 2000 and Beyond

	Fresh.	Fresh.	Soph.	Junior	Senior	UPB	NU	GM	GD	GPB	NG
Totals	**1017**	**701**	**1710**	**2625**	**3183**	**514**	**1110**	**2559**	**358**	**531**	**922**
FT Freshmen											
Con. Freshmen	310	37					23				
Sophomore	284	316	215				32				1
Junior	4	52	859	428	1		37				
Senior		8	122	1440	1036		34				1
UPB	←			**Each cell divided by the column total**				5		35	22 →
NU	1			1			120				
GM		1		1	5	35	31	1134	1	83	111
GD								6	244	1	1
GPB		1		1	1	1	9		1	88	22
NG					2						111
degree granted			1	179	1577	70	5	850	42	40	5
dropout/stopout	1 minus the sum of each column for each of these cells →										

Developing the transition matrix.

5. b. The complete probability matrix.
Check that each column adds to one

Modeling Enrollment for Fall 2000 and Beyond

	Fresh.	Fresh.	Soph.	Junior	Senior	UPB	NU	GM	GD	GPB	NG
FT Freshmen	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Con. Freshme	0.305	0.053	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.000
Sophomore	0.279	0.451	0.126	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.001
Junior	0.004	0.074	0.502	0.163	0.000	0.000	0.033	0.000	0.000	0.000	0.000
Senior	0.000	0.011	0.071	0.549	0.325	0.000	0.031	0.000	0.000	0.000	0.001
UPB	0.000	0.000	0.000	0.000	0.001	0.364	0.009	0.002	0.000	0.066	0.024
NU	0.001	0.000	0.000	0.000	0.000	0.000	0.108	0.000	0.000	0.000	0.000
GM	0.000	0.001	0.000	0.000	0.002	0.068	0.028	0.443	0.003	0.156	0.120
GD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.682	0.002	0.001
GPB	0.000	0.001	0.000	0.000	0.000	0.002	0.008	0.000	0.003	0.166	0.024
NG	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.120
degree granted	0.000	0.000	0.001	0.068	0.495	0.136	0.005	0.332	0.117	0.075	0.005
dropout/stopout	0.411	0.408	0.300	0.219	0.176	0.430	0.729	0.220	0.196	0.535	0.703
	1	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

II. Estimating the enrollment

1. Insert actual enrollment data from fall 1999
   Then apply the matrix to these numbers.

Modeling Enrollment for Fall 2000 and Beyond

Fall 1999

Student Level	FT Fresh.	Fresh.	Soph.	Junior	Senior	UPB	NU	GM	GD	GPB	NG	*total*
4th week data →	**1110**	**707**	**1784**	**2842**	**3323**	**594**	**1236**	**2746**	**364**	**454**	**881**	**16041**
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	0.305	0.053	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.000	
	0.279	0.451	0.126	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.001	
	0.004	0.074	0.502	0.163	0.000	0.000	0.033	0.000	0.000	0.000	0.000	
	0.000	0.011	0.071	0.549	0.325	0.000	0.031	0.000	0.000	0.000	0.001	
	0.000	0.000	0.000	0.000	0.001	0.364	0.009	0.002	0.000	0.066	0.024	
	0.001	0.000	0.000	0.000	0.000	0.000	0.108	0.000	0.000	0.000	0.000	
	0.000	0.001	0.000	0.000	0.002	0.068	0.028	0.443	0.003	0.156	0.120	
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.682	0.002	0.001	
	0.000	0.001	0.000	0.000	0.000	0.002	0.008	0.000	0.003	0.166	0.024	
	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.120	
	0.000	0.000	0.001	0.068	0.495	0.136	0.005	0.332	0.117	0.075	0.005	
	0.411	0.408	0.300	0.219	0.176	0.430	0.729	0.220	0.196	0.535	0.703	

Estimating the enrollment

2. Using the probability matrix the table is filled in with the estimated transitions of students who were enrolled the previous fall term.

Modeling Enrollment for Fall 2000 and Beyond

Fall 1999

		FT Fresh.	Fresh.	Soph.	Junior	Senior	UPB	NU	GM	GD	GPB	NG
		1110	707	1784	2842	3323	594	1236	2746	364	454	881
Fall	FT Freshmen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	Con. Freshmen	338.35	37.32	0.00	0.00	0.00	0.00	25.61	0.00	0.00	0.00	0.00
	Sophomore	309.97	318.70	224.30	0.00	0.00	0.00	35.63	0.00	0.00	0.00	0.96
	Junior	4.37	52.45	896.17	463.38	1.04	0.00	41.20	0.00	0.00	0.00	0.00
	Senior	0.00	8.07	127.28	1559.04	1081.57	0.00	37.86	0.00	0.00	0.00	0.96
	UPB	0.00	0.00	0.00	0.00	2.09	216.11	11.14	5.37	0.00	29.92	21.02
	NU	1.09	0.00	0.00	1.08	0.00	0.00	133.62	0.00	0.00	0.00	0.00
	GM	0.00	1.01	0.00	1.08	5.22	40.45	34.52	1216.87	1.02	70.96	106.06
	GD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.44	248.09	0.85	0.96
	GPB	0.00	1.01	0.00	1.08	1.04	1.16	10.02	0.00	1.02	75.24	21.02
	NG	0.00	0.00	0.00	0.00	2.09	0.00	0.00	0.00	0.00	0.00	106.06
	degree granted	0.00	0.00	1.04	193.80	1646.36	80.89	5.57	912.11	42.70	34.20	4.78
	dropout/stopout	456.22	288.45	535.20	622.53	583.59	255.40	900.83	605.21	71.17	242.82	619.18

Estimating the enrollment

3. Next estimate the number of new* students entering the system.
   *This includes 1st time students and stopouts who are returning to the institution.

Modeling Enrollment for Fall 2000 and Beyond

estimate of students entering the system

Fall 1999

			FT Fresh.	Fresh.	Soph.	Junior	Senior	UPB	NU	GM	GD	GPB	NG
			1110	707	1784	2842	3323	594	1236	2746	364	454	881
Fall	FT Freshmen	**1154**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	Con. Freshmen	**403**	338.35	37.32	0.00	0.00	0.00	0.00	25.61	0.00	0.00	0.00	0.00
	Sophomore	**1015**	309.97	318.70	224.30	0.00	0.00	0.00	35.63	0.00	0.00	0.00	0.96
	Junior	**1409**	4.37	52.45	896.17	463.38	1.04	0.00	41.20	0.00	0.00	0.00	0.00
	Senior	**690**	0.00	8.07	127.28	1559.04	1081.57	0.00	37.86	0.00	0.00	0.00	0.96
	UPB	**347**	0.00	0.00	0.00	0.00	2.09	216.11	11.14	5.37	0.00	29.92	21.02
	NU	**1170**	1.09	0.00	0.00	1.08	0.00	0.00	133.62	0.00	0.00	0.00	0.00
	GM	**1320**	0.00	1.01	0.00	1.08	5.22	40.45	34.52	1216.87	1.02	70.96	106.06
	GD	**110**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.44	248.09	0.85	0.96
	GPB	**373**	0.00	1.01	0.00	1.08	1.04	1.16	10.02	0.00	1.02	75.24	21.02
	NG	**900**	0.00	0.00	0.00	0.00	2.09	0.00	0.00	0.00	0.00	0.00	106.06
		0	0.00	0.00	1.04	193.80	1646.36	80.89	5.57	912.11	42.70	34.20	4.78
		0	456.22	288.45	535.20	622.53	583.59	255.40	900.83	605.21	71.17	242.82	619.18
total students entering		**8,891**											

Estimating the enrollment

4. Add across the rows to find the estimate of enrollment at each level.

Modeling Enrollment for Fall 2000 and Beyond

			Add across the rows →											16,041	1999
Fall	FT Freshmen	1154	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**1,154**	
2000	Con. Freshmen	403	338.35	37.32	0.00	0.00	0.00	0.00	25.61	0.00	0.00	0.00	0.00	**804**	
	Sophomore	1015	309.97	318.70	224.30	0.00	0.00	0.00	35.63	0.00	0.00	0.00	0.96	**1,905**	
	Junior	1409	4.37	52.45	896.17	463.38	1.04	0.00	41.20	0.00	0.00	0.00	0.00	**2,868**	
	Senior	690	0.00	8.07	127.28	1559.04	1081.57	0.00	37.86	0.00	0.00	0.00	0.96	**3,505**	
	UPB	347	0.00	0.00	0.00	0.00	2.09	216.11	11.14	5.37	0.00	29.92	21.02	**633**	
	NU	1170	1.09	0.00	0.00	1.08	0.00	0.00	133.62	0.00	0.00	0.00	0.00	**1,306**	
	GM	1320	0.00	1.01	0.00	1.08	5.22	40.45	34.52	1216.87	1.02	70.96	106.06	**2,797**	
	GD	110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.44	248.09	0.85	0.96	**366**	
	GPB	373	0.00	1.01	0.00	1.08	1.04	1.16	10.02	0.00	1.02	75.24	21.02	**485**	
	NG	900	0.00	0.00	0.00	0.00	2.09	0.00	0.00	0.00	0.00	0.00	106.06	**1,008**	
		0	0.00	0.00	1.04	193.80	1646.36	80.89	5.57	912.11	42.70	34.20	4.78	2,921	
		0	456.22	288.45	535.20	622.53	583.59	255.40	900.83	605.21	71.17	242.82	619.18	5,181	
total students entering		8,891										**Total Enrolled**		**16,830**	**Fall 2000**
												% change from previous year		**4.92%**	

Sources of Data

- End-of-term enrollment census files (SCARF)

Data sources used for model modification (non-Markov adjustments)

- Admissions Funnel Data – Data about applications, admission decisions and matriculation
- Oregon K-12 enrollment data
- Portland Community College Enrollment

Sources of Information - Collaborations

Data sources used for model modification (non-Markov adjustments)

Enrollment Management and Student Affairs (EMSA)

Dean of Graduate Studies (OGS)

Program Directors: High School Dual Enrollment, ESL, Deans

Data source: UG Admissions

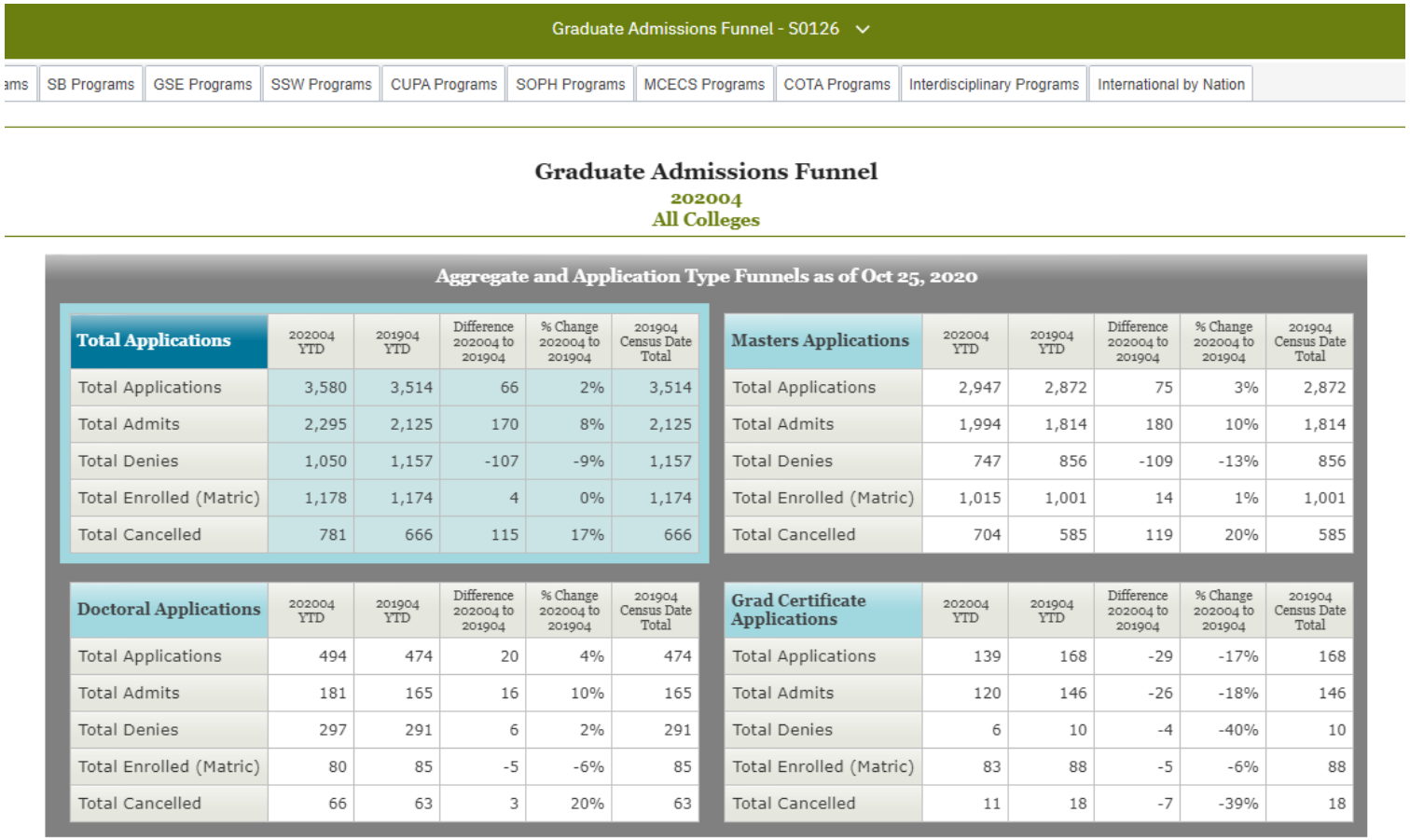
Undergraduate Admissions Funnel - S0122

	Selected Term		1 Year Prior					2 Years Prior					5 Year Avg
Freshman Enrollment Funnel	202004 YTD	*202004 Conversion*	201904 YTD	*201904 Conversion*	Difference 202004 to 201904	% Change 202004 to 201904	201904 Total (Census Date)	201804 YTD	*201804 Conversion*	Difference 202004 to 201804	% Change 202004 to 201804	201804 Total (Census Date)	5 Year Avg 201604-202004
Prospects*	**98,607**		71,148		27,459	39%	71,148	0		98,607		75,927	80,108
Inquiries	**38,231**		45,763		-7,532	-16%	45,766	0		38,231		47,472	40,536
Funnel Begins Here													
Applicants	**7,899**		7,850		49	1%	7,850	0		7,899		9,070	8,521
Completed Applicants	**6,701**	**85%**	6,861	87%	-160	-2%	6,861	0		6,701		7,821	7,350
Admits	**6,379**	**81%**	6,573	84%	-194	-3%	6,573	0		6,379		7,517	7,028
Confirms (ITE)	**1,973**	**31%**	2,161	33%	-188	-9%	2,161	0		1,973		2,405	2,228
Enrolled (Matric)	**1,559**	**24%**	1,726	26%	-167	-10%	1,726	0		1,559		1,915	1,791
Cancelled	**1,230**		1,619		-389	-24%	1,619	0		1,230		1,607	1,485

	Selected Term		1 Year Prior					2 Years Prior					5 Year Avg
Transfer Enrollment Funnel	202004 YTD	*202004 Conversion*	201904 YTD	*201904 Conversion*	Difference 202004 to 201904	% Change 202004 to 201904	201904 Total (Census Date)	201804 YTD	*201804 Conversion*	Difference 202004 to 201804	% Change 202004 to 201804	201804 Total (Census Date)	5 Year Avg 201604-202004
Prospects*	**21,424**		2,354		19,070	810%	2,354	0		21,424		9,255	6,727
Inquiries	**17,218**		9,699		7,519	78%	9,705	0		17,218		3,253	7,861
Funnel Begins Here													
Applicants	**4,948**		5,117		-169	-3%	5,117	0		4,948		5,604	5,275
Completed Applicants	**4,203**	**85%**	4,454	87%	-251	-6%	4,454	0		4,203		4,784	4,502
Admits	**4,103**	**83%**	4,357	85%	-254	-6%	4,357	0		4,103		4,656	4,355
Confirms (ITE)	**2,960**	**72%**	3,235	74%	-275	-9%	3,235	0		2,960		3,555	3,152
Enrolled (Matric)	**2,426**	**59%**	2,687	62%	-261	-10%	2,687	0		2,426		2,982	2,599
Cancelled	**453**		460		-7	-2%	460	0		453		486	506

Undergraduate Admissions Funnel - S0122

Data source: Grad Admissions



Graduate Admissions Funnel
202004
All Colleges

Aggregate and Application Type Funnels as of Oct 25, 2020

Total Applications	202004 YTD	201904 YTD	Difference 202004 to 201904	% Change 202004 to 201904	201904 Census Date Total
Total Applications	3,580	3,514	66	2%	3,514
Total Admits	2,295	2,125	170	8%	2,125
Total Denies	1,050	1,157	-107	-9%	1,157
Total Enrolled (Matric)	1,178	1,174	4	0%	1,174
Total Cancelled	781	666	115	17%	666

Masters Applications	202004 YTD	201904 YTD	Difference 202004 to 201904	% Change 202004 to 201904	201904 Census Date Total
Total Applications	2,947	2,872	75	3%	2,872
Total Admits	1,994	1,814	180	10%	1,814
Total Denies	747	856	-109	-13%	856
Total Enrolled (Matric)	1,015	1,001	14	1%	1,001
Total Cancelled	704	585	119	20%	585

Doctoral Applications	202004 YTD	201904 YTD	Difference 202004 to 201904	% Change 202004 to 201904	201904 Census Date Total
Total Applications	494	474	20	4%	474
Total Admits	181	165	16	10%	165
Total Denies	297	291	6	2%	291
Total Enrolled (Matric)	80	85	-5	-6%	85
Total Cancelled	66	63	3	20%	63

Grad Certificate Applications	202004 YTD	201904 YTD	Difference 202004 to 201904	% Change 202004 to 201904	201904 Census Date Total
Total Applications	139	168	-29	-17%	168
Total Admits	120	146	-26	-18%	146
Total Denies	6	10	-4	-40%	10
Total Enrolled (Matric)	83	88	-5	-6%	88
Total Cancelled	11	18	-7	-39%	18

Graduate Admissions Funnel - S0126

Data source: OR K-12 Enrollment

County	Attending District Institution ID	District Name	2020-21 Grade Two	2020-21 Grade Three	2020-21 Grade Four	2020-21 Grade Five	2020-21 Grade Six	2020-21 Grade Seven	2020-21 Grade Eight	2020-21 Grade Nine	2020-21 Grade Ten	2020-21 Grade Eleven	2020-21 Grade Twelve
Washington	2240	Banks SD 13	71	68	77	83	87	85	93	83	86	99	99
Washington	2243	Beaverton SD 48J	2,860	2,993	2,856	3,045	3,078	3,142	3,123	3,247	3,221	3,145	3,293
Clackamas	1929	Canby SD 86	307	325	312	339	303	343	352	349	352	330	335
Multnomah	2185	Centennial SD 28J	411	414	458	413	453	499	433	462	453	472	456
Clackamas	1902	Clackamas ESD	20	8	15	16	18	13	17	20	11	9	32
Clackamas	1927	Colton SD 53	31	33	30	29	47	46	43	41	47	50	57
Multnomah	2186	Corbett SD 39	78	79	76	97	88	89	104	89	75	81	78
Multnomah	2187	David Douglas SD 40	688	698	700	718	735	762	774	754	679	705	745
Clackamas	1930	Estacada SD 108	228	213	202	216	223	208	220	246	290	347	372
Washington	2241	Forest Grove SD 15	402	444	457	425	443	476	450	501	493	441	491
Washington	2245	Gaston SD 511J	31	28	44	23	47	49	38	42	42	50	56
Clackamas	1931	Gladstone SD 115	115	117	130	127	142	151	166	134	158	171	139
Multnomah	2183	Gresham-Barlow SD 10J	791	851	858	868	849	911	957	993	988	982	1,161
Washington	2239	Hillsboro SD 1J	1,471	1,469	1,404	1,455	1,555	1,559	1,532	1,506	1,599	1,498	1,596
Clackamas	1923	Lake Oswego SD 7J	433	458	481	516	524	568	557	640	636	666	625
Clackamas	1925	Molalla River SD 35	201	196	189	202	207	211	219	201	187	193	179
Multnomah	2148	Multnomah ESD	8	16	26	25	22	22	32	33	49	65	124
Clackamas	1924	North Clackamas SD 12	1,233	1,091	1,219	1,241	1,224	1,352	1,314	1,398	1,378	1,354	1,402
Washington	2230	Northwest Regional ESD	2	8	6	5	12	9	21	33	42	39	31
Clackamas	1928	Oregon City SD 62	533	519	499	534	596	603	634	630	592	588	638
Clackamas	1926	Oregon Trail SD 46	321	331	305	327	313	354	355	386	367	323	337
Multnomah	2181	Parkrose SD 3	180	198	198	212	251	235	260	266	261	228	273
Multnomah	2180	Portland SD 1J	3,743	3,654	3,754	3,766	3,610	3,665	3,732	3,437	3,477	3,453	3,666
Multnomah	2182	Reynolds SD 7	837	827	835	891	882	917	801	773	710	641	766
Multnomah	2188	Riverdale SD 51J	39	33	43	43	51	48	50	57	60	46	59
Washington	2244	Sherwood SD 88J	327	345	348	367	420	433	428	454	382	388	396
Washington	2242	Tigard-Tualatin SD 23J	852	872	906	875	914	947	921	971	936	949	1,049
Clackamas	1922	West Linn-Wilsonville SD 3J	603	642	638	736	758	758	846	813	813	783	775
			16,816	**16,930**	**17,066**	**17,594**	**17,852**	**18,455**	**18,472**	**18,559**	**18,384**	**18,096**	**19,230**

[Fall Membership Reports]

Data source: PCC Enrollment

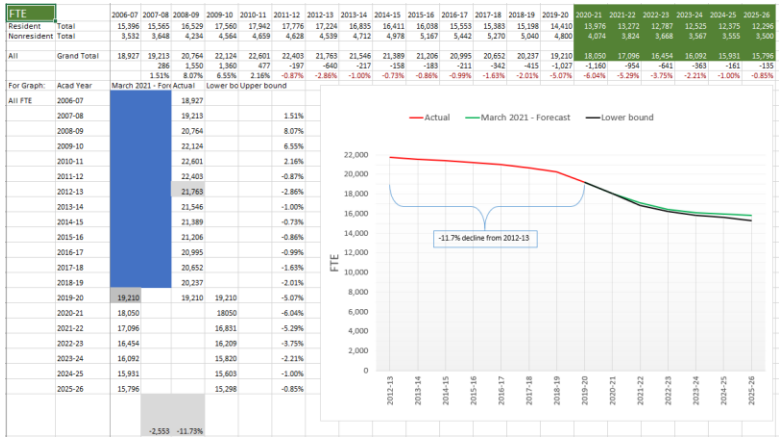
(Data provided by special request to the HECC Research Office)

Portland Community College Student Headcount: ASOT or AAOT Major						
Fall Headcount				Annual Headcount		
Term/Year	Declared Intent	Headcount		AcadYear	Declared Intent	Headcount
Fall 2009	AAOT or ASOT	4210		2009-10	AAOT or ASOT	7059
Fall 2010	AAOT or ASOT	4418		2010-11	AAOT or ASOT	6832
Fall 2011	AAOT or ASOT	5181		2011-12	AAOT or ASOT	7832
Fall 2012	AAOT or ASOT	6145		2012-13	AAOT or ASOT	8815
Fall 2013	AAOT or ASOT	6422		2013-14	AAOT or ASOT	9138
Fall 2014	AAOT or ASOT	6139		2014-15	AAOT or ASOT	8853
Fall 2015	AAOT or ASOT	5611		2015-16	AAOT or ASOT	8003
Fall 2016	AAOT or ASOT	5490		2016-17	AAOT or ASOT	7717
Fall 2017	AAOT or ASOT	5317		2017-18	AAOT or ASOT	7452
Fall 2018	AAOT or ASOT	4874	% decline	2018-19	AAOT or ASOT	6974
Fall 2019	AAOT or ASOT	4580	-0.06	2019-20	Estimated	6905

HECC - IR Office

Process:

1st step – Estimating the headcount enrollment by student level and residency



FTE		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Resident	Total	15,396	15,565	16,529	17,560	17,942	17,776	17,224	16,835	16,411	16,038	15,553	15,383	15,198	14,410	13,976	13,272	12,787	12,525	12,375	12,296
Nonresident	Total	3,532	3,648	4,234	4,564	4,659	4,628	4,539	4,712	4,978	5,167	5,442	5,270	5,040	4,800	4,074	3,824	3,668	3,567	3,555	3,500
All	Grand Total	18,927	19,213	20,764	22,124	22,601	22,403	21,763	21,546	21,389	21,206	20,995	20,652	20,237	19,210	18,050	17,096	16,454	16,092	15,931	15,796
			286	1,550	1,360	477	-197	-640	-217	-158	-183	-211	-342	-415	-1,027	-1,160	-954	-641	-363	-161	-135
			1.51%	8.07%	6.55%	2.16%	-0.87%	-2.86%	-1.00%	-0.73%	-0.86%	-0.99%	-1.63%	-2.01%	-5.07%	-6.04%	-5.29%	-3.75%	-2.21%	-1.00%	-0.85%
For Graph:	Acad Year	March 2021 - Fore	Actual	Lower bo	Upper bound																
All FTE	2006-07		18,927																		
	2007-08		19,213				1.51%														
	2008-09		20,764				8.07%														
	2009-10		22,124				6.55%														
	2010-11		22,601				2.16%														
	2011-12		22,403				-0.87%														
	2012-13		21,763				-2.86%														
	2013-14		21,546				-1.00%														
	2014-15		21,389				-0.73%														
	2015-16		21,206				-0.86%														
	2016-17		20,995				-0.99%														
	2017-18		20,652				-1.63%														
	2018-19		20,237				-2.01%														
	2019-20	19,210		19,210	19,210		-5.07%														
	2020-21	18,050			18050		-6.04%														
	2021-22	17,096			16,831		-5.29%														
	2022-23	16,454			16,209		-3.75%														
	2023-24	16,092			15,820		-2.21%														
	2024-25	15,931			15,603		-1.00%														
	2025-26	15,796			15,298		-0.85%														
				-2,553	-11.73%																

I. Ten student groups included in the analysis

- Resident admitted undergraduate (UG)
- Non-resident admitted (UG)
- Resident non-admitted (UG)
- Non-resident non-admitted (UG)
- Resident Masters level
- Non-resident Masters level
- Resident Doctoral
- Non-resident Doctoral
- Non-resident admitted (Grad Level)
- Resident non-admitted (Grad Level)

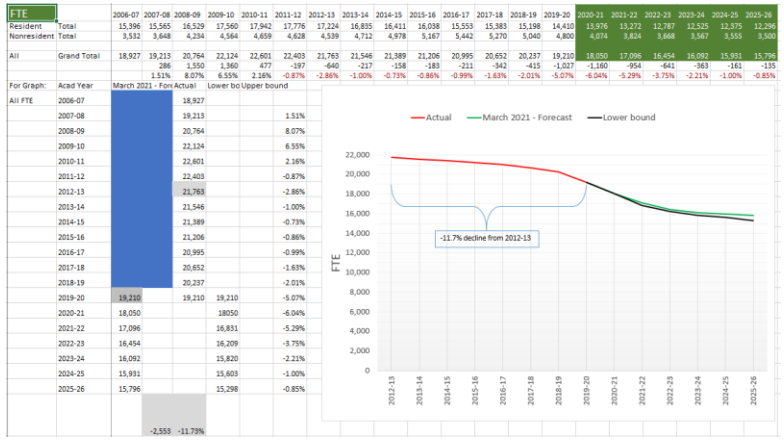
Process: Why these groupings?

- Resident admitted undergraduate (UG)
- Non-resident admitted (UG)
- Resident non-admitted (UG)
- Non-resident non-admitted (UG)
- Resident Masters level
- Non-resident Masters level
- Resident Doctoral
- Non-resident Doctoral
- Non-resident admitted (Grad Level)
- Resident non-admitted (Grad Level)

Grouped at minimum level needed for rev. forecast

Process

1st step – Estimating the headcount enrollment by student level and residency



FTE		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Resident	Total	15,396	15,565	16,529	17,560	17,942	17,776	17,224	16,835	16,411	16,038	15,553	15,383	15,198	14,410	13,976	13,272	12,787	12,529	12,375	12,296
Nonresident	Total	3,532	3,648	4,234	4,564	4,659	4,628	4,539	4,712	4,978	5,167	5,442	5,270	5,040	4,800	4,074	3,824	3,668	3,567	3,555	3,500
All	Grand Total	18,927	19,213	20,764	22,124	22,601	22,403	21,763	21,546	21,389	21,206	20,995	20,652	20,237	19,210	18,050	17,096	16,454	16,093	15,931	15,796
			286	1,550	1,360	477	-197	-640	-217	-158	-183	-211	-342	-415	-1,027	-1,160	-954	-641	-363	-161	-135
			1.51%	8.07%	6.55%	2.16%	-0.87%	-2.86%	-1.00%	-0.73%	-0.86%	-0.99%	-1.63%	-2.01%	-5.07%	-6.04%	-5.29%	-3.75%	-2.21%	-1.00%	-0.85%

For Graph:	Acad Year	March 2021 - Fore	Actual	Lower bo	Upper bound	
All FTE	2006-07		18,927			
	2007-08		19,213			1.51%
	2008-09		20,764			8.07%
	2009-10		22,124			6.55%
	2010-11		22,601			2.16%
	2011-12		22,403			-0.87%
	2012-13		21,763			-2.86%
	2013-14		21,546			-1.00%
	2014-15		21,389			-0.73%
	2015-16		21,206			-0.86%
	2016-17		20,995			-0.99%
	2017-18		20,652			-1.63%
	2018-19		20,237			-2.01%
	2019-20	19,210		19,210	19,210	-5.07%
	2020-21	18,050			18050	-6.04%
	2021-22	17,096			16,831	-5.29%
	2022-23	16,454			16,209	-3.75%
	2023-24	16,092			15,820	-2.21%
	2024-25	15,931			15,603	-1.00%
	2025-26	15,796			15,298	-0.85%
				-2,553	-11.73%	

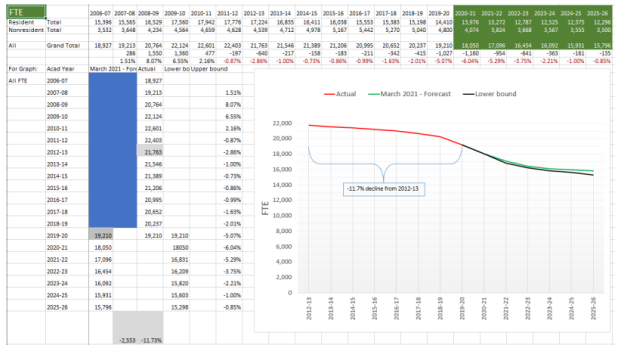
II. Estimating the headcount enrollment by student level and residency

A. Continuing Enrollment

- Fall cont. enrollment based on spring to fall probability matrix (Markov)
- Winter cont. enrollment based on fall to winter probability matrix (Markov)
- Spring cont. enrollment based on winter to spring probability matrix (Markov)
- Summer enrollment based on spring to summer probability matrix (Markov)

Process

1st step – Estimating the headcount enrollment by student level and residency

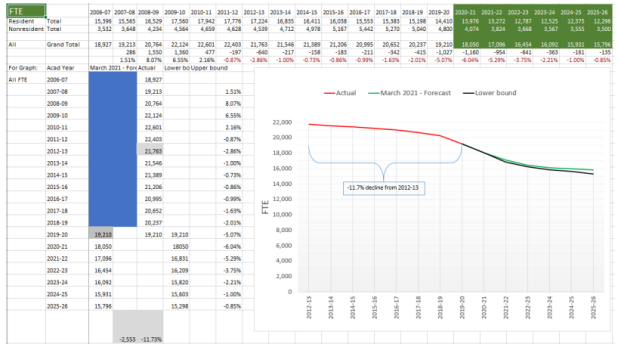


B. **New** Fall Enrollment – methodology depends on the student population

First-year admitted UG resident – Tri-county high school model; will cover in example 1

Process

1st step – Estimating the headcount enrollment by student level and residency

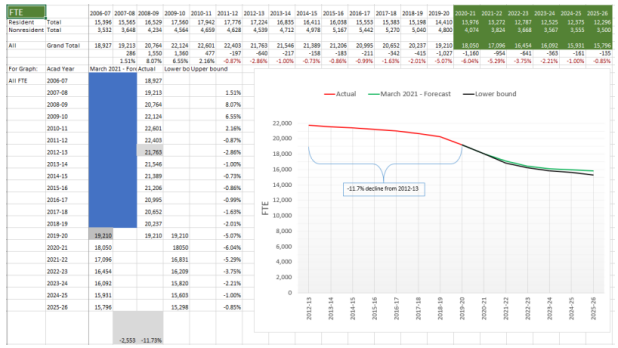


B. **New** Fall Enrollment – methodology depends on the student population

First-year admitted UG non-resident – Historic and current application funnel trends and EMSA feedback; will cover in example 2

Process

1st step – Estimating the headcount enrollment by student level and residency

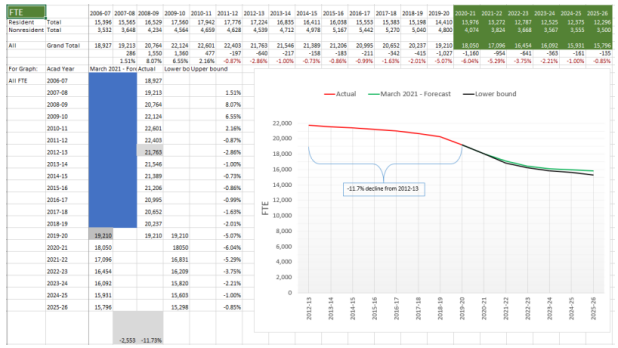


B. **New** Fall Enrollment – methodology depends on the student population

Transfers UG resident – Portland Community College (PCC) proxy model; will cover in example 3

Process

1st step – Estimating the headcount enrollment by student level and residency

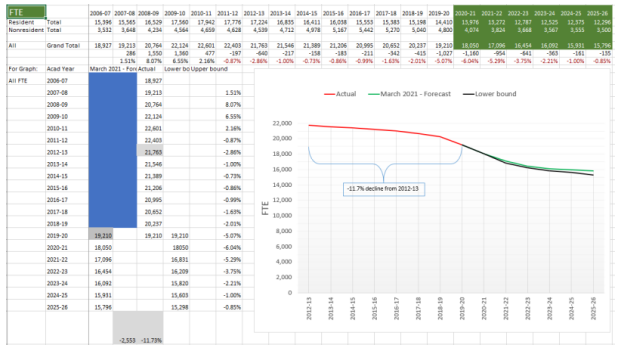


B. **New** Fall Enrollment – methodology depends on the student population

Transfer UG non-resident – Historic and current application funnel trends and EMSA feedback

Process

1st step – Estimating the headcount enrollment by student level and residency

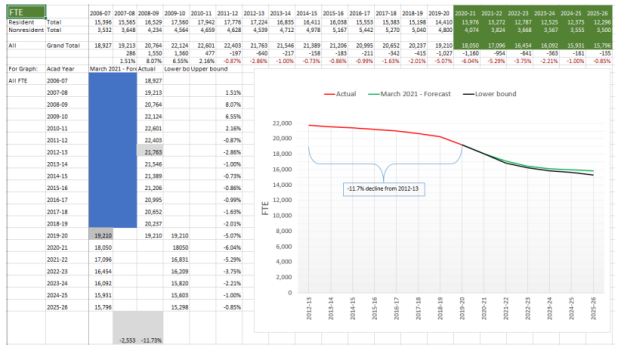


B. **New** Fall Enrollment – methodology depends on the student population

Masters level resident/non-resident – Historic and current application funnel trends and OGS feedback

Process

1st step – Estimating the headcount enrollment by student level and residency

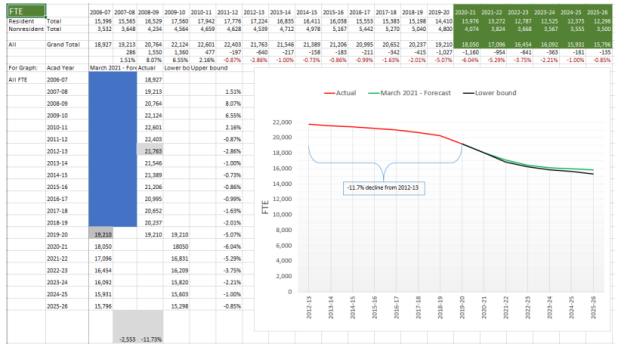


B. **New** Fall Enrollment – methodology depends on the student population

Doctoral level resident/non-resident – Historic enrollment (Markov default)

Process

1st step – Estimating the headcount enrollment by student level and residency



B. **New** Fall Enrollment – methodology depends on the student population

UG level non-admit resident/non-resident – Historic enrollment trends and program feedback

Grad level non-admit resident/non-resident – Historic enrollment trends (Markov default)

Process - New Enrollment: example 1

First-year admitted UG resident – Tri-county high school model

Office of Institutional Research and Planning

Check tri-county grad class size

February, 2023

Model for First-Time Resident Students (Tri-County Area)

Fall 2019, 78% of the 1,258 where direct from tri-county.

Fall Membership 2021-22

				Fall 11	Fall 12	Fall 13	Fall 14	Fall 15	Fall 16	Fall 17	Fall 18	Fall 19	Fall 20	Fall 21	Fall 22	Fall 23	Fall 24	Fall 25	Fall 26
														1.10%	4.11%	5.13%	6.31%	7.86%	9.60%
				Actual												Estimated			
	Year New to PSU			Fall 11	Fall 12	Fall 13	Fall 14	Fall 15	Fall 16	Fall 17	Fall 18	Fall 19	Fall 20	Fall 21	Fall 22	Fall 23	Fall 24	Fall 25	Fall 26
	HS Senior Population (Fall prior)			19,055	19,118	19,419	19,292	19,664	19,745	19,561	19,631	19,583	19,222	19,230	19,363	19,240	19,234	19,384	19,072
	HS % Change Fall to Fall				0.3%	1.6%	-0.7%	1.9%	0.4%	-0.9%	0.4%	-0.2%	-1.8%	0.0%	0.7%	-0.6%	0.0%	0.8%	-1.6%
Avg yearly % point change		**1.38%**	yr change	9.75061%				1.8%	1.5%	3.3%	2.0%	0.9%	3.31%	0.55%	3.03%	3.54%	4.12%	4.88%	5.72%
Potential Growth in High School	Flat Using Latest HS Grad Rate for Tri-Counties (Most Recent Spring Grad Rate)				73.8%	75.3%	75.6%	77.0%	78.1%	80.7%	82.3%	83.0%	85.8%	84.1%	84.1%	84.1%	84.1%	84.1%	84.1%
	Potential HS Grad Rate Increase (about 1/5 of the previous 5 year rate increase)	**2.86%**	(Fall20 to Fall25)										85.8%	86.2%	86.7%	87.1%	87.6%	88.2%	88.9%
	Potential HS Grad Rate Increase (about 2/5 of the previous 5 year rate increase)	**5.78%**	(Fall20 to Fall25)										85.8%	86.7%	87.6%	88.4%	89.4%	90.7%	92.2%
Actuals	Actual Fall Oregon High School Students Matriculated **			1,001	1,052	1,144	1,126	1,150	1,094	1,393	1,334	1,258	1,194	1,338	1,255				
	% change High												*4.69%*	*1.14%*	*1.70%*	*0.33%*	*1.10%*	*2.25%*	*-0.02%*
	% change Low												*-12.19%*	*-1.88%*	*0.69%*	*-0.64%*	*-0.03%*	*0.78%*	*-1.61%*
	PSU yield rates				7.5%	7.8%	7.7%	7.6%	7.1%	8.8%	8.3%	7.7%	7.2%	8.3%	7.7%				
Potential Yields	**Low -Linear Trend (4 year basis, 2017-2020)**	**6.7%**											1,105	1,084	1,091	1,084	1,084	1,092	1,075
													1,105	1,111	1,124	1,123	1,129	1,146	1,136
													1,105	1,117	1,136	1,140	1,152	1,178	1,178
	Low - Previous Years Rate	**7.7%**											1,270	1,246	1,255	1,247	1,247	1,256	1,236
													1,270	1,278	1,293	1,291	1,298	1,318	1,307
													1,270	1,285	1,307	1,311	1,325	1,355	1,355
	High- Avg Recent Rates (Fall 21 through Fall 22)	**8.0%**											1,317	1,292	1,301	1,293	1,292	1,303	1,282
													1,317	1,325	1,341	1,339	1,346	1,366	1,355
													1,317	1,332	1,355	1,359	1,374	1,405	1,405

Note: The HS Senior Population fields are populated with Tri-County Area data as a proxy for the potential pool for all new resident domestic first-time students.

* The HS senior population for 2019 is actual.

```
**select count(distinct "SCARF_STUDENT_PSU"."ZSPSTDN_PIDM") "C0", "SCARF_STUDENT_PSU"."ZSPSTDN_OIRP_STYP_CODE" "C1"
 from "ODSMGR"."SCARF_STUDENT_PSU" "SCARF_STUDENT_PSU"
 where "SCARF_STUDENT_PSU"."ACADEMIC_PERIOD" in ('201604') and "SCARF_STUDENT_PSU"."ACADEMIC_SNAPSHOT" in ('EOT') and "SCARF_STUDENT_PSU"."ZSPSTDN_RESIDENT"='R' and "SCARF_STUDENT_PSU"."ZSPSTDN_ADMIT_TERM" in ('10')
"SCARF_STUDENT_PSU"."ZSPSTDN_ADMIT_YR" in ('201617') and "SCARF_STUDENT_PSU"."ZSPSTDN_OIRP_STYP_CODE" in ('B', 'C', 'D', 'E')
 group by "SCARF_STUDENT_PSU"."ZSPSTDN_OIRP_STYP_CODE"  (IF this is different than SCARF "N1" default to "N1" value.  ------------------------------------------------------------>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
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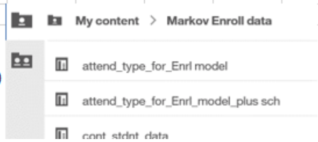
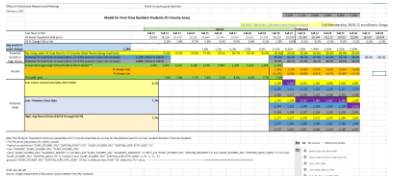


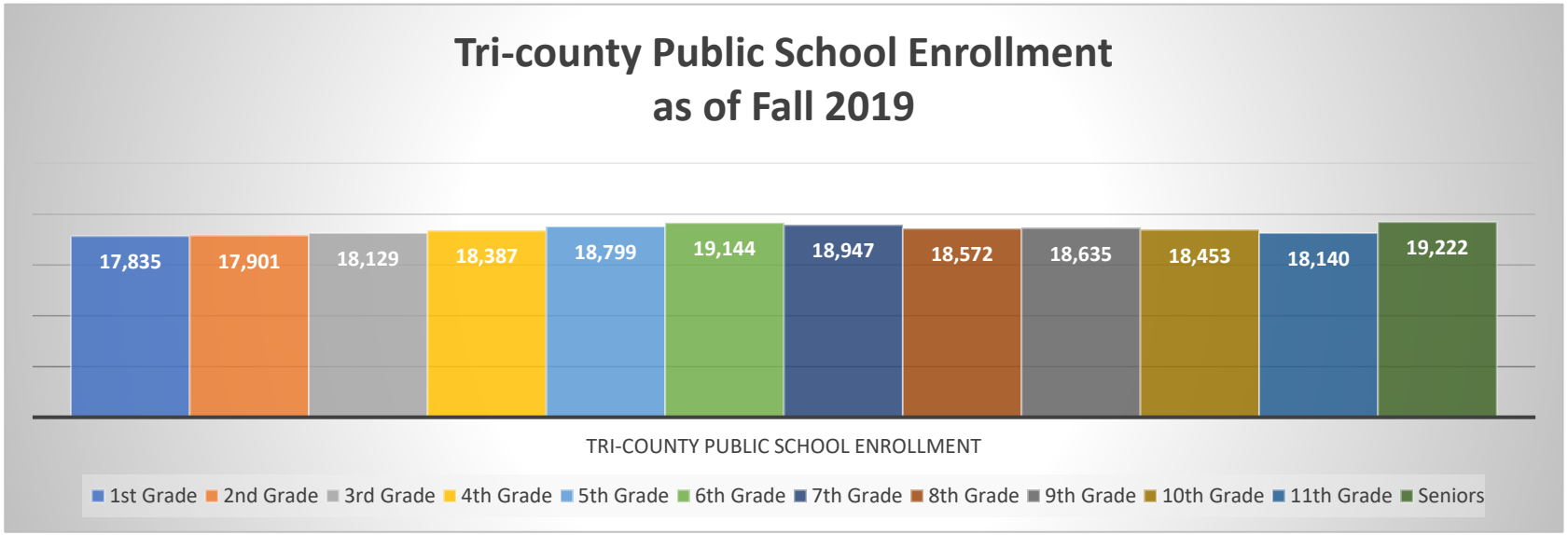
Process - New Enrollment: example 1

Tri-county K-12 public school enrollment data is the basis for estimating potential **all** resident first-year enrollment



- Fall 2022 81% came from the Tri-county school-districts

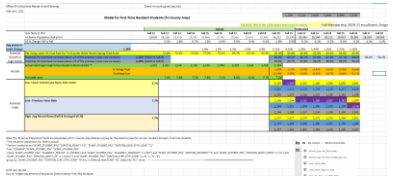
Oregon Dept. of Education reports enrollment by grade level and school district. This detailed data set allows us to see the enrollment potential for the next 12 years



Process - New Enrollment: example 1

Model has two decision points where we rely on the expertise and current recruitment plans from EMSA:

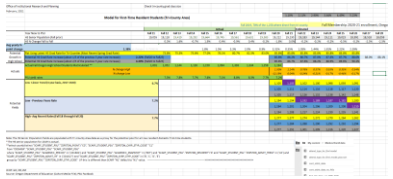
1. Pick the estimated change in graduation rates (Tri-county)
2. Pick the yield rates



	Estimated			
Year New to PSU	Fall 23	Fall 24	Fall 25	Fall 26
HS Senior Population (Fall prior)	19,240	19,234	19,384	19,072
HS % Change Fall to Fall	-0.6%	0.0%	0.8%	-1.6%
% change High	*0.33%*	*1.10%*	*2.25%*	*-0.02%*
% change Low	*-0.64%*	*-0.03%*	*0.78%*	*-1.61%*
PSU yield rates				
Low -Linear Trend (4 year basis, 2017-2020)	1,084	1,084	1,092	1,075
	1,123	1,129	1,146	1,136
	1,140	1,152	1,178	1,178
Med - Previous Years Rate	1,247	1,247	1,256	1,236
	1,291	1,298	1,318	1,307
	1,311	1,325	1,355	1,355
High- Avg Recent Rates (Fall 21 through Fall 22)	1,293	1,292	1,303	1,282
	1,339	1,346	1,366	1,355
	1,359	1,374	1,405	1,405

Process - New Enrollment: example 1

Use these inputs to calculate the yield rate and then apply this rate to the entire new 1st-year resident population



Academic Period		201804	201904	202004	202104	202204	202304	202404	202504	202604
HS Senior Population		19631	19583	19222	19230	19363	19240	19234	19384	19072
First Year Student	Resident	1344	1270	1189	1323	1259	1339	1346	1366	1355
% Yield		8.3%	7.8%	7.2%	8.2%	7.7%	8.27%	8.32%	8.38%	8.45%

Process - New Enrollment: example 2

First-year admitted UG non-resident – Historic and current application funnel trends and EMSA feedback

Relies on EMSA to estimate total applications for this population based on recruitment plans, current funnel information and experience

- A large portion of this potential student population is influenced by the university policies around the Western Undergraduate Exchange (WUE)

Academic Period		201804	201904	202004	202104	202204	202304	202404	202504	202604
First Time Stdnt Apps	Non-Resident	4436	3804	3670	4159	4137	4456	4570	4609	4648
% change in apps	Non-Resident	-11.5%	-14.2%	-3.5%	13.3%	-0.5%	7.7%	2.6%	0.9%	0.9%
Admitted	Non-Resident	3542	2918	2744	3130	3366	3625	3718	3750	3782
% admitted	Non-Resident	0.798467	0.7670873	0.747684	0.752585	0.813633	81.4%	81.4%	81.4%	81.4%
First Time Student	Non-Resident	552	448	332	395	371	400	410	413	417
% admitted/enrolled	Non-Resident	15.6%	15.4%	12.1%	12.6%	11.0%	11.0%	11.0%	11.0%	11.0%

Process - New Enrollment: example 3

Transfers UG resident – Portland Community College (PCC) proxy model

PCC transfers are the largest source of new resident transfer students

- Over the last 5 years **50.9%**

Enrollment trends from PCC are used as a proxy for estimating PSU's total new resident transfer population.

The model based on two year lag

Portland Community College Student Headcount: ASOT or AAOT Major

Fall Headcount				Annual Headcount			
Term/Year	Declared Intent	Headcount		AcadYear	Declared Intent	Headcount	2 yr lag
Fall 2009	AAOT or ASOT	4210		2009-10	AAOT or ASOT	7059	1,324
Fall 2010	AAOT or ASOT	4418		2010-11	AAOT or ASOT	6832	1,325
Fall 2011	AAOT or ASOT	5181		2011-12	AAOT or ASOT	7832	1,420
Fall 2012	AAOT or ASOT	6145		2012-13	AAOT or ASOT	8815	1,266
Fall 2013	AAOT or ASOT	6422		2013-14	AAOT or ASOT	9138	1,255
Fall 2014	AAOT or ASOT	6139		2014-15	AAOT or ASOT	8853	1,157
Fall 2015	AAOT or ASOT	5611		2015-16	AAOT or ASOT	8003	1,153
Fall 2016	AAOT or ASOT	5490		2016-17	AAOT or ASOT	7717	1,493
Fall 2017	AAOT or ASOT	5317		2017-18	AAOT or ASOT	7452	1,240
Fall 2018	AAOT or ASOT	4874	% decline	2018-19	AAOT or ASOT	6974	1,164
Fall 2019	AAOT or ASOT	4580	-0.06032	2019-20	Estimated	6077	1,243

David Burgess:
1st year of transfers finish free program.

Notes:

AAOT = Associate of Art - Oregon Transfer

ASOT = Associate of Science - Oregon Transfer

Process - New Enrollment: example 3

PCC enrollment for future years uses same methodology as the 1st-time resident student population

- tri-county K-12 public school enrollment

Portland Community College Transfer Model*

	% of Last 2 HS pop (moving) of PCC enrollment			23%	24%	23%	21%	20%	19%	18%	15%	14%	14%	14%	14%	14%	14%
											Estimated						
		Fall 11	Fall 12	Fall 13	Fall 14	Fall 15	Fall 16	Fall 17	Fall 18	Fall 19	Fall 20	Fall 21	Fall 22	Fall 23	Fall 24	Fall 25	Fall 26
	PCC Potential Transfer Population (Headcount)	6,832	7,832	8,815	9,138	8,853	8,003	7,717	7,452	6,974	6,077	5,482	5,343	5,364	5,347	5,349	5,347
	PCC % Change Fall to Fall	-3.22%	14.64%	12.55%	3.66%	-3.12%	-9.60%	-3.57%	-3.43%	-6.41%	-12.87%	-9.79%	-2.54%	0.39%	-0.31%	0.04%	-0.05%
													-31%	-28%	-23%	-12%	-2%
Actuals	Actual Fall PCC Transfer	1,324	1,325	1,420	1,266	1,255	1,157	1,153	1,493	1,240	1,164	1,243					
	% change in population		0.08%	7.17%	-10.85%	-0.87%	-7.81%	-0.35%	29.49%	7.55%	-6.13%	6.79%					
	Actual yield rates (Lagged 2 years)		19%	21%	16%	14%	13%	13%	19%	16%	15.6%	17.8%					
Yield Rates	Low - Last years rate flat		16.5%							16.2%		17.8%	17.8%	17.8%	17.8%	17.8%	17.8%
	Linear Trend Rate (last 5 years excluding 2018)											17.8%	20.5%	23.1%	24.0%	24.3%	24.7%
	High PCC Regresion model											14.3%	25.8%	26.7%	27.0%	27.0%	27.0%
PCC Transfers Enrollment												1,243	1,083	977	952	956	953
												1,243	1,246	1,265	1,283	1,301	1,320
												1,243	1,378	1,432	1,445	1,443	1,444
	% change in Transfers low											6.8%	-12.9%	-9.8%	-2.5%	0.4%	-0.3%
	% change in Transfers mid											6.8%	0.3%	1.5%	1.4%	1.4%	1.4%
	% change in Transfers high											6.8%	10.9%	3.9%	0.9%	-0.1%	0.1%

David Burgess:
1st year of transfers finish free program.

	Estimated									
	Fall 17	Fall 18	Fall 19	Fall 20	Fall 21	Fall 22	Fall 23	Fall 24	Fall 25	Fall 26
PCC Potential Transfer Population (Headcount)	7,717	7,452	6,974	6,077	5,482	5,343	5,364	5,347	5,349	5,347
PCC % Change Fall to Fall	-3.57%	-3.43%	-6.41%	-12.87%	-9.79%	-2.54%	0.39%	-0.31%	0.04%	-0.05%

Process - New Enrollment: example 3

Yield rate assumption relies on expertise and current recruitment plans from EMSA

Portland Community College Transfer Model*

		Fall 11	Fall 12	Fall 13	Fall 14	Fall 15	Fall 16	Fall 17	Fall 18	Fall 19	Fall 20 Estimated	Fall 21	Fall 22	Fall 23	Fall 24	Fall 25	Fall 26
	% of Last 2 HS pop (moving) of PCC enrollment			23%	24%	23%	21%	20%	19%	18%	15%	14%	14%	14%	14%	14%	14%
	PCC Potential Transfer Population (Headcount)	6,832	7,832	8,815	9,138	8,853	8,003	7,717	7,452	6,974	6,077	5,482	5,343	5,364	5,347	5,349	5,347
	PCC % Change Fall to Fall	-3.22%	14.64%	12.55%	3.66%	-3.12%	-9.60%	-3.57%	-3.43%	-6.41%	-12.87%	-9.79%	-2.54%	0.39%	-0.31%	0.04%	-0.05%
													-31%	-28%	-23%	-12%	-2%
Actuals	Actual Fall PCC Transfer	1,324	1,325	1,420	1,266	1,255	1,157	1,153	1,493	1,240	1,164	1,243					
	% change in population		0.08%	7.17%	-10.85%	-0.87%	-7.81%	-0.35%	29.49%	7.55%	-6.13%	6.79%					
	Actual yield rates (Lagged 2 years)		19%	21%	16%	14%	13%	13%	19%	16%	15.6%	17.8%					
Yield Rates	Low - Last years rate flat		16.5%							16.2%		17.8%	17.8%	17.8%	17.8%	17.8%	17.8%
	Linear Trend Rate (last 5 years excluding 2018)											17.8%	20.5%	23.1%	24.0%	24.3%	24.7%
	High PCC Regresion model											14.3%	25.8%	26.7%	27.0%	27.0%	27.0%
PCC Transfers Enrollment												1,243	1,083	977	952	956	953
												1,243	1,246	1,265	1,283	1,301	1,320
												1,243	1,378	1,432	1,445	1,443	1,444
	% change in Transfers low											6.8%	-12.9%	-9.8%	-2.5%	0.4%	-0.3%
	% change in Transfers mid											6.8%	0.3%	1.5%	1.4%	1.4%	1.4%
	% change in Transfers high											6.8%	10.9%	3.9%	0.9%	-0.1%	0.1%

David Burgess:
1st year of transfers finish free program.

	Actual yield rates (Lagged 2 years)	13%	19%	16%	15.6%	17.8%				
Yield Rates	Low - Last years rate flat					17.8%	17.8%	17.8%	17.8%	17.8%	17.8%
	Linear Trend Rate (last 5 years excluding 2018)					17.8%	20.5%	23.1%	24.0%	24.3%	24.7%
	High PCC Regresion model					14.3%	25.8%	26.7%	27.0%	27.0%	27.0%

Process - New Enrollment: example 3

Resultant growth rate is applied to the entire UG resident transfer population

Portland Community College Transfer Model*

	% of Last 2 HS pop (moving) of PCC enrollment			23%	24%	23%	21%	20%	19%	18%	15%	14%	14%	14%	14%	14%	14%
											Estimated						
		Fall 11	Fall 12	Fall 13	Fall 14	Fall 15	Fall 16	Fall 17	Fall 18	Fall 19	Fall 20	Fall 21	Fall 22	Fall 23	Fall 24	Fall 25	Fall 26
	PCC Potential Transfer Population (Headcount)	6,832	7,832	8,815	9,138	8,853	8,003	7,717	7,452	6,974	6,077	5,482	5,343	5,364	5,347	5,349	5,347
	PCC % Change Fall to Fall	-3.22%	14.64%	12.55%	3.66%	-3.12%	-9.60%	-3.57%	-3.43%	-6.41%	-12.87%	-9.79%	-2.54%	0.39%	-0.31%	0.04%	-0.05%
													-31%	-28%	-23%	-12%	-2%
Actuals	Actual Fall PCC Transfer	1,324	1,325	1,420	1,266	1,255	1,157	1,153	1,493	1,240	1,164	1,243					
	% change in population		0.08%	7.17%	-10.85%	-0.87%	-7.81%	-0.35%	29.49%	7.55%	-6.13%	6.79%					
	Actual yield rates (Lagged 2 years)		19%	21%	16%	14%	13%	13%	19%	16%	15.6%	17.8%					
Yield Rates	Low - Last years rate flat		16.5%							16.2%		17.8%	17.8%	17.8%	17.8%	17.8%	17.8%
	Linear Trend Rate (last 5 years excluding 2018)											17.8%	20.5%	23.1%	24.0%	24.3%	24.7%
	High PCC Regresion model											14.3%	25.8%	26.7%	27.0%	27.0%	27.0%
PCC Transfers Enrollment												1,243	1,083	977	952	956	953
												1,243	1,246	1,265	1,283	1,301	1,320
												1,243	1,378	1,432	1,445	1,443	1,444
			% change in Transfers low									6.8%	-12.9%	-9.8%	-2.5%	0.4%	-0.3%
			% change in Transfers mid									6.8%	0.3%	1.5%	1.4%	1.4%	1.4%
			% change in Transfers high									6.8%	10.9%	3.9%	0.9%	-0.1%	0.1%

David Burgess:
1st year of transfers finish free program.

Fall 22	Fall 23	Fall 24	Fall 25	Fall 26
5,343	5,364	5,347	5,349	5,347
-2.54%	0.39%	-0.31%	0.04%	-0.05%
-12.9%	-9.8%	-2.5%	0.4%	-0.3%
0.3%	1.5%	1.4%	1.4%	1.4%
10.9%	3.9%	0.9%	-0.1%	0.1%

Process

Net result of the new student modeling and continuing enrollment (using Markov):

- 10 student segments for future time period

Headcount	201804	201904	202004	202104	202204	202304
Resident	**21361**	**20286**	**19092**	**18569**	**17657**	**17180**
UG	14517	14040	13314	12724	11756	11279
NA_UG	2985	2707	2302	2240	2636	2753
Master	3179	2938	2948	3011	2756	2649
PhD	331	328	305	330	281	271
NA_Grad	349	273	223	264	228	228
Nonresident	**5924**	**5730**	**5005**	**4612**	**4357**	**4281**
UG	3977	3735	3262	2887	2547	2387
NA_UG	362	443	189	182	298	345
Master	1163	1135	1100	1167	1190	1229
PhD	339	326	312	310	291	289
NA_Grad	83	91	142	66	31	31
Grand Total	**27285**	**26016**	**24097**	**23181**	**22014**	**21461**

Process
2nd step – Estimating SCH

The total enrollment segments are then multiplied by the SCH carrying load which is estimated for each of the 10 student populations. The default for the carrying load is Markov chain but in most instances the carrying load matrix is adjusted to reflect observable trends.

	Avg Carry									
		201804	201904	202004	202104	202204	202304	202404	202504	202604
Resident	UG	11.7	11.8	12.0	11.7	11.8	11.8	11.8	11.8	11.8
Nonresident	UG	12.9	12.9	12.7	12.5	12.7	12.7	12.6	12.7	12.7
Resident	NA_UG	4.9	4.8	4.9	4.8	4.8	4.8	4.8	4.8	4.8
Nonresident	NA_UG	14.2	13.6	7.5	10.4	10.5	10.5	10.5	10.5	10.5
Resident	Master	7.7	7.7	7.8	7.8	8.0	7.9	7.9	7.9	7.9
Nonresident	Master	8.3	8.6	8.3	8.3	8.5	8.4	8.4	8.4	8.4
Resident	PhD	5.5	5.1	5.0	5.3	5.9	5.4	5.5	5.6	5.5
Nonresident	PhD	7.1	7.3	7.1	7.2	7.1	7.2	7.2	7.2	7.2
Resident	NA_Grad	3.8	3.8	4.0	3.8	3.7	3.8	3.8	3.8	3.8
Nonresident	NA_Grad	3.7	3.9	4.4	3.9	3.7	3.7	3.7	3.7	3.7

=Linear Trend(BaseF12 throughF17)
=Flatline (Base F21)
=3 year moving avg
4 year moving avg
=Markov

Process
- example - observable trend

	Avg Carry									
		201804	201904	202004	202104	202204	202304	202404	202504	202604
Resident	UG	11.7	11.8	12.0	11.7	11.8	11.8	11.8	11.8	11.8
Nonresident	UG	12.9	12.9	12.7	12.5	12.7	12.7	12.6	12.7	12.7
Resident	NA_UG	4.9	4.8	4.9	4.8	4.8	4.8	4.8	4.8	4.8
Nonresident	NA_UG	14.2	13.6	7.5	10.4	10.5	10.5	10.5	10.5	10.5
Resident	Master	7.7	7.7	7.8	7.8	8.0	7.9	7.9	7.9	7.9
Nonresident	Master	8.3	8.6	8.3	8.3	8.5	8.4	8.4	8.4	8.4
Resident	PhD	5.5	5.1	5.0	5.3	5.9	5.4	5.5	5.6	5.5
Nonresident	PhD	7.1	7.3	7.1	7.2	7.1	7.2	7.2	7.2	7.2
Resident	NA_Grad	3.8	3.8	4.0	3.8	3.7	3.8	3.8	3.8	3.8
Nonresident	NA_Grad	3.7	3.9	4.4	3.9	3.7	3.7	3.7	3.7	3.7

=Linear Trend(BaseF12 throughF17)

=Flatline (Base F21)

=3 year moving avg

4 year moving avg

=Markov

Process

The forecasted SCH is then converted into annual FTE

FTE									
		2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Resident	UG	11,302	10,889	10,002	9,329	8,931	8,555	8,324	8,156
Nonresident	UG	3,254	2,850	2,455	2,188	2,040	1,942	1,888	1,856
Resident	NA_UG	683	577	629	733	758	763	768	776
Nonresident	NA_UG	396	129	132	200	219	228	238	250
Resident	Master	2,135	2,180	2,176	2,035	1,953	1,905	1,882	1,869
Nonresident	Master	842	817	866	907	924	942	963	982
Resident	PhD	187	171	193	167	158	155	149	146
Nonresident	PhD	266	247	246	232	229	227	223	220
Resident	NA_Grad	103	98	104	100	98	98	99	98
Nonresident	NA_Grad	41	59	25	19	18	19	19	19
Resident	Total	14,410	13,914	13,103	12,364	11,898	11,476	11,221	11,045
Nonresident	Total	4,800	4,102	3,723	3,545	3,431	3,357	3,331	3,327
All	Grand Total	19,210	18,016	16,827	15,909	15,329	14,833	14,552	14,372
		-1,027	-1,194	-1,190	-918	-580	-496	-281	
		-5.07%	-6.22%	-6.60%	-5.45%	-3.65%	-3.23%	-1.90%	

Additional OIRP Markov Model: RCAT Enrollment Forecast

OIRP uses an additional Markov model for assisting OAA in maintaining the RCAT planning tool. OIRP also uses the RCAT model for validating the results of the FTE model. The methodology is much the same as the FTE model but because of the complex detail required in the RCAT tool the Markov chain assumptions are usually adhered to. The FTE model has 10 X 2 probability matrix at its core were in contrast the RCAT model uses a 30 X 36 probability matrix a portion of which is shown below.

	TRUE		589.7899356	228.883	1123.15	4637.79	5.9139	86.5769	582.249	447.846	442.014	301.599	67.3659	278.11	937.011	1042	75.1306	573.933	133.359	1086.42	381.809	532.539	1924.97	467.094	92.7723	371.958	343.655	2325.81	185.876	70.
	22073.78163		CLAS_01_MAST	CLAS_01_	CLAS_LD	CLAS_UD	COTA_26_	COTA_26_	COTA_26_	COTA_LD	COTA_UD	CUPA_11_	CUPA_11_	CUPA_LD	CUPA_UD	GSED_07_	GSED_07_	MCECS_2	MCECS_2	MCECS_2	MCECS_L	MCECS_U	PSU_LD	PSU_MAS	PSU_UD	SBA_06_L	SBA_06_M	SBA_06_U	SBA_LD	SBA_U
ACADEMIC_PERIOD	COLLEGE_DESC	RESIDENCY																												
202101	Chal_Link	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00617	0	0	0	0	0	0	
202101	Chal_Link	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.44162	0	0	0	0	0	0	
202101	CLAS	N	2.60264611	4.48715	1.98258	1.54636	0	0.03829	0.54904	0.71752	0.6332	0.11189	0.41025	0.95128	0.53426	0.00757	0	0.07055	0.09881	0.44307	1.37413	1.29407	0.12542	0.2916	0.91294	0.67186	0.07615	0.31314	1.05884	0.63
202101	CLAS	R	4.457882337	2.56933	6.36032	7.71721	1.35898	0.16308	1.622	1.32338	1.70478	0.15553	0.15884	2.93668	2.05342	0.02218	0	0.1639	0.06576	1.13239	4.394	3.36486	1.28514	1.71943	4.77532	2.38455	0.01158	1.29778	2.40457	3.05
202101	COTA	N	0.006119527	0	0.13332	0.09729	2.01944	3.64409	2.2604	2.14517	2.27086	0.03541	0	0.071	0.09421	0	0	0.01218	0	0.03027	0.02931	0.02601	0.01541	0.04582	0	0.13358	0.01549	0.07653	0.15949	0.26
202101	COTA	R	0.017457957	0	0.25262	0.38781	7.43709	5.27929	5.74603	4.27326	5.72567	0.02755	0	0.23863	0.22803	0.01026	0	0.00632	0	0.06279	0.10209	0.16506	0.1791	0.15052	0.10475	0.28887	0.0241	0.28778	0.37709	0.2
202101	CUPA	N	0.035541443	0	0.10168	0.07975	0	0.05507	0.0491	0.01304	0.04906	2.45269	3.76695	1.06705	1.73007	0	0	0.01076	0	0.02743	0.02538	0.0989	0.03007	0.07328	0	0.33447	0.18514	0.12821	0.49454	0.17
202101	CUPA	R	0.032548541	0.01611	0.2764	0.41219	0	0.06767	0.05746	0.13908	0.1464	4.07705	1.5442	3.81541	5.56126	0.01625	0	0.06639	0	0.11557	0.10692	0.26202	0.20414	0.41836	0.4923	1.36898	0.31857	0.44303	1.35731	1.58
202101	IELP	N	0	0	0.01123	0	0	0	0	0.00799	0	0.00162	0	0	0.00995	0	0	0.00084	0.02581	0.02178	0.09793	0.06145	0.25048	0.0021	0	0	0	0.00344	0.33878	0.17
202101	IELP	R	0	0	0	0	0	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00173	0	0	0	0	0	0	
202101	International Program	N	0	0	0.01423	0.00652	0	0	0	0.01688	0	0.00514	0	0.0297	0.00332	0	0	0	0	0	0	0	0.05677	0.00666	0.02933	0	0	0.00641	0.01293	
202101	International Program	R	0	0	0.02371	0.01305	0	0	0.00471	0.00563	0.01411	0.00771	0	0.0297	0.02986	0	0	0	0	0	0.0146	0	0.00732	0	0	0	0	0.00951	0.03879	0.0
202101	MCECS	N	0.031214076	0.01545	0.00555	0.01164	0	0	0.00551	0.01317	0.01652	0	0	0	0	0	0	3.35418	3.98934	2.14545	0.74336	0.99885	0.01929	0.31356	0.10301	0.00768	0.04214	0.00601	0.02649	
202101	MCECS	R	0.091545435	0.02614	0.03366	0.04005	0	0	0.03108	0.03715	0.04658	0.02037	0	0.03921	0.01314	0.00414	0	3.13544	1.45053	7.89165	2.75649	3.3731	0.05521	0.5712	0.21302	0.00866	0.11883	0.02329	0.02988	0.10
202101	OTHER	N	0	0	0.00075	0.00124	0	0	0	0	0	0	0	0	0.00419	0	0	0	0	0.00512	0	0	0	0	0	0.00828	0	0.00283	0	
202101	OTHER	R	0	0.0125	0.00599	0.00412	0	0	0.00594	0.00888	0	0	0	0.0125	0.0199	0	0	0	0	0.00427	0.00461	0	0	0	0.00926	0.00621	0	0.01053	0.02041	
202101	SB	N	0	0	0.0376	0.03472	0	0.03588	0.11196	0.05098	0.11986	0.01165	0	0.03364	0.0526	0	0	0.00601	0	0.02451	0.01653	0.06644	0.00968	0.03015	0	0.8394	2.44375	1.58768	0.54185	0.65
202101	SB	R	0.01082949	0.01787	0.07383	0.13509	0	0.05361	0.21665	0.11426	0.26743	0.0905	0	0.05361	0.11002	0.00424	0	0	0	0.08057	0.03953	0.15883	0.0347	0.11262	0	3.71579	5.41542	7.65328	1.24278	2.15
202101	SED	N	0.01578901	0.01737	0.0117	0.01352	0	0	0.00619	0	0.00928	0	0	0	0.00873	1.32037	0.36183	0	0	0	0	0	0.00723	0.26271	0	0.00863	0	0.00675	0	
202101	SED	R	0.066694995	0	0.01157	0.07838	0.21473	0.03865	0	0.02403	0	0.10039	0	0.01812	0.01922	6.32803	4.24083	0	0	0.0033	0	0	0.07335	0.57245	1.45834	0	0	0.00156	0	
202101	SOPH	N	0	0	0.02844	0.0418	0	0.01	0.04012	0.01599	0.02227	0.14286	0	0	0.04817	0.00198	0	0.06365	0	0.01708	0.00461	0.0101	0.01156	0.03782	0.03704	0.01242	0.00284	0.02024	0.0449	0.10
202101	SOPH	R	0.005050505	0	0.09581	0.20774	0.11111	0.03	0.05795	0.0444	0.07572	0.22403	0	0.125	0.10262	0.00198	0	0	0	0.0222	0.04378	0.04209	0.04817	0.08613	0.31481	0.06418	0	0.09069	0.05306	0.23
202101	SSW	N	0	0	0.01238	0.03256	0	0	0.01229	0.00734	0.01842	0.01007	0.04027	0.02584	0.02165	0	0	0	0	0	0	0.00696	0.00159	0.0456	0.03828	0	0	0.01004	0	0.11
202101	SSW	R	0	0	0.04857	0.17472	0	0	0.00603	0.01441	0.03613	0.00988	0	0.02535	0.09767	0.00702	0	0	0	0.01385	0.00934	0	0.00469	0.01491	0.31918	0	0	0.02668	0	
202101	SYSC	N	0.019268123	0.031	0	0.00424	0	0	0.0068	0	0	0	0	0	0.0024	0	0	0.0786	0	0	0	0.00385	0.00088	0.00962	0	0	0.02601	0	0	
202101	SYSC	R	0.053440582	0.10287	0	0.02208	0	0	0.00419	0.00501	0	0.00916	0	0.01764	0.00886	0	0	0.04017	0	0.01205	0	0.03325	0.00217	0	0	0.00584	0.07214	0.01828	0	
202101	UHC	N	0	0	0.08446	0.04943	0	0	0.0526	0.14148	0.05174	0	0	0.06569	0.06951	0	0	0	0	0.0189	0.07138	0.00745	0.00213	0	0	0.09162	0	0.01433	0.06773	
202101	UHC	R	0	0	0.20782	0.11534	0	0	0.02908	0.09776	0.08717	0	0	0.25609	0.11271	0	0	0	0	0.02507	0.14937	0.02471	0.00848	0	0	0.12155	0	0.01387	0.06989	
202101	UNST	N	0	0	0.67682	0.10172	0.40967	0	0.19859	0.98232	0.11086	0	0	0.70283	0.19497	0	0	0	0	0.00945	0.6329	0.09155	0.04973	0	0	0.58587	0	0.08098	0.77502	0.15
202101	UNST	R	0	0	2.58494	0.60353	1.54363	0	0.6795	2.55809	0.43318	0	0	2.70256	0.5625	0	0	0	0	0.03658	2.46483	0.15008	1.35982	0	0.04288	2.77805	0	0.09843	2.87304	0.26

Additional OIRP Markov Model: RCAT Enrollment Forecast

The estimated annual FTE of the RCAT model is 72 FTE higher than the FTE model, (17,096) for the 2021-22.

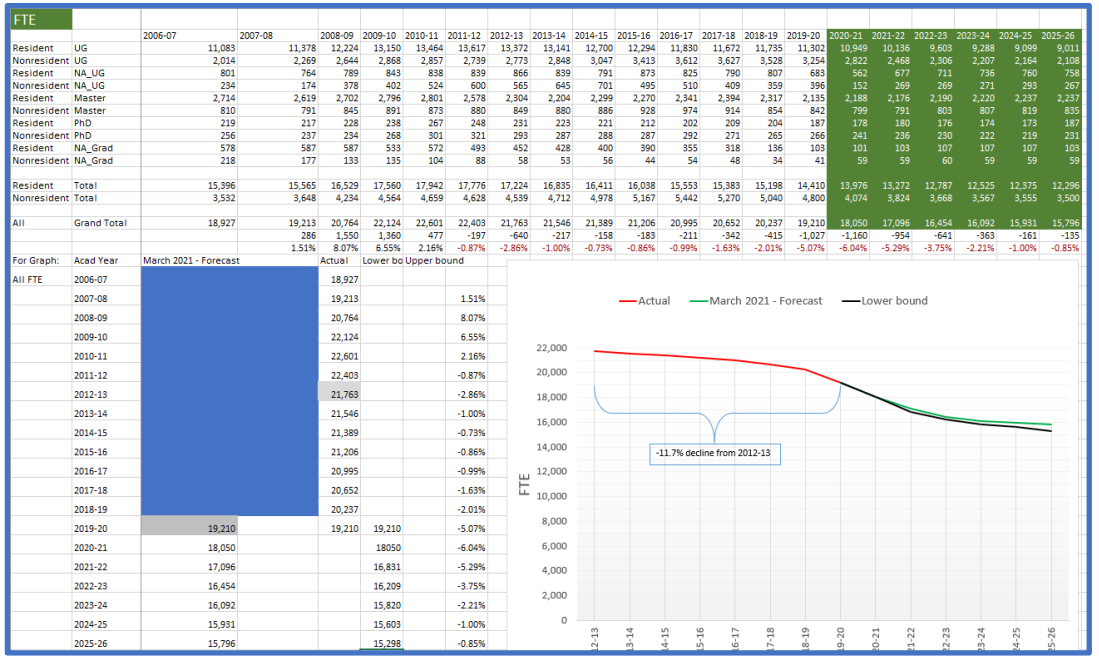
Total SCH 2021-22	735,621		CLAS_01_MAST	CLAS_01_PHD	CLAS_LD	CLAS_UD	COTA_26_LD	COTA_26_MAST	COTA_26_UD	COTA_LD	COTA_UD	CUPA_11_MAST	CUPA_11_PHD	CUPA_LD	CUPA_UD
Resident	556,532		9,161	1,945	32,417	135,396	289	1,561	12,729	11,547	10,536	4,876	364	9,222	24,794
Non-resident	179,089		5,453	3,291	11,243	30,701	131	1,106	5,193	6,300	4,317	2,985	916	3,540	8,185
			14,614	5,236	43,660	166,097	420	2,668	17,922	17,847	14,853	7,861	1,281	12,762	32,979
Chal_Link	N	52	0	0	0	0	0	0	0	0	0	0	0	0	
Chal_Link	R	9,293	0	0	0	0	0	0	0	0	0	0	0	0	
CLAS	N	61,477	5180	3220	6952	22751	13	11	844	1113	896	86	76	1110	15
CLAS	R	211,655	8514	1788	21091	102962	40	34	2291	1894	2146	126	24	2556	56
COTA	N	14,528	13	0	442	1440	94	1048	3450	3145	2815	22	0	80	2
COTA	R	36,545	52	0	991	5505	176	1448	8616	5946	6828	22	0	198	6
CUPA	N	15,350	73	4	416	1288	0	26	83	73	95	2695	828	1282	50
CUPA	R	43,064	58	10	1096	5665	3	32	167	171	243	4331	336	3755	150
IELP	N	8,923	4	0	116	9	0	6	0	56	0	2	0	53	
IELP	R	49	0	0	0	0	0	30	0	0	0	0	0	0	
International Program	N	4,590	34	0	283	425	0	0	12	75	15	15	0	158	
International Program	R	2,601	31	0	259	948	0	0	54	46	40	55	0	98	3
MCECS	N	19,944	39	12	34	168	3	2	8	24	27	4	3	0	
MCECS	R	40,424	108	9	117	650	3	0	52	58	51	16	2	40	
OTHER	N	100	0	6	2	24	0	0	0	0	0	0	0	0	
OTHER	R	353	3	20	27	73	0	0	4	11	1	0	0	17	
SB	N	20,592	0	0	163	595	3	10	232	106	132	26	0	57	1
SB	R	70,477	18	4	273	1994	8	8	368	186	389	74	0	77	3
SED	N	6,442	36	18	36	143	0	3	5	0	3	7	0	0	
SED	R	31,451	145	4	62	975	1	8	4	23	5	100	0	6	
SOPH	N	7,447	4	0	107	617	0	1	38	19	23	123	4	25	1
SOPH	R	28,646	19	0	407	3289	1	3	94	59	100	134	2	65	3
SSW	N	5,217	0	0	62	484	0	0	11	6	23	6	5	23	
SSW	R	31,122	9	0	257	2651	0	0	28	16	52	15	0	55	2
SYSC	N	417	69	31	3	101	0	0	6	6	0	0	0	0	
SYSC	R	1,385	204	110	6	450	0	0	14	3	4	4	0	22	
UHC	N	1,797	0	0	259	547	3	0	79	162	51	0	0	78	1
UHC	R	3,584	0	0	517	1368	0	0	63	112	88	0	0	168	2
UNST	N	12,213	0	0	2368	2109	16	0	425	1513	235	0	0	674	5
UNST	R	45,885	0	0	7314	8866	57	0	975	3022	589	0	0	2165	17

Totals by Unit	Res		Differential Hours		FTE	Undergraduate Le	Masters Level	PhD Level
Chal_Link	All	9,345				606,826	117,440	11,355
CLAS	All	273,132	CLAS-01	19,849		15	12	9
COTA	All	51,073	COTA-26	21,009	17,168	13,485	3,262	421
CUPA	All	58,414	CUPA-11	9,142				
IELP	All	8,972			-874			
International Prog	All	7,191			-4.8%			
MCECS	All	60,367	MCECS-24	54,639				
OTHER	All	453						
SB	All	91,069	SBA-26	113,875				
SED	All	37,893	GSED-07	32,437				
SOPH	All	36,093	SSW-08	20,585				
SSW	All	36,339						
SYSC	All	1,801						
UHC	All	5,381						
UNST	All	58,098						

Enrollment Forecast Model (annual FTE)

Portland State UNIVERSITY

OFFICE OF INSTITUTIONAL RESEARCH AND PLANNING



FTE

		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Resident	UG	11,083	11,378	12,224	13,150	13,464	13,617	13,372	13,141	12,700	12,294	11,830	11,672	11,735	11,302	10,949	10,136	9,603	9,288	9,099	9,011
Nonresident	UG	2,014	2,269	2,644	2,868	2,857	2,739	2,773	2,848	3,047	3,413	3,612	3,627	3,528	3,254	2,822	2,468	2,306	2,207	2,164	2,108
Resident	NA_UG	801	764	789	843	838	839	866	839	791	873	825	790	807	683	562	677	711	736	760	758
Nonresident	NA_UG	234	174	378	402	524	600	565	645	701	495	510	409	359	396	152	269	269	271	293	267
Resident	Master	2,714	2,619	2,702	2,796	2,801	2,578	2,304	2,204	2,299	2,270	2,341	2,394	2,317	2,135	2,188	2,176	2,190	2,220	2,237	2,237
Nonresident	Master	810	791	845	891	873	880	849	880	886	928	974	914	854	842	799	791	803	807	819	835
Resident	PhD	219	217	228	238	267	248	231	223	221	212	202	209	204	187	178	180	176	174	173	187
Nonresident	PhD	256	237	234	268	301	321	293	287	288	287	292	271	265	266	241	236	230	222	219	231
Resident	NA_Grad	578	587	587	533	572	493	452	428	400	390	355	318	136	103	101	103	107	107	107	103
Nonresident	NA_Grad	218	177	133	135	104	88	58	53	56	44	54	48	34	41	59	59	60	59	59	59
Resident	Total	15,396	15,565	16,529	17,560	17,942	17,776	17,224	16,835	16,411	16,038	15,553	15,383	15,198	14,410	13,976	13,272	12,787	12,525	12,375	12,296
Nonresident	Total	3,532	3,648	4,234	4,564	4,659	4,628	4,539	4,712	4,978	5,167	5,442	5,270	5,040	4,800	4,074	3,824	3,668	3,567	3,555	3,500
All	Grand Total	18,927	19,213	20,764	22,124	22,601	22,403	21,763	21,546	21,389	21,206	20,995	20,652	20,237	19,210	18,050	17,096	16,454	16,092	15,931	15,796
			286	1,550	1,360	477	-197	-640	-217	-158	-183	-211	-342	-415	-1,027	-1,160	-954	-641	-363	-161	-135
			1.51%	8.07%	6.55%	2.16%	-0.87%	-2.86%	-1.00%	-0.73%	-0.86%	-0.99%	-1.63%	-2.01%	-5.07%	-6.04%	-5.29%	-3.75%	-2.21%	-1.00%	-0.85%

For Graph:	Acad Year	March 2021 - Forecast	Actual	Lower bo	Upper bound
All FTE	2006-07		18,927		
	2007-08		19,213		1.51%
	2008-09		20,764		8.07%
	2009-10		22,124		6.55%
	2010-11		22,601		2.16%
	2011-12		22,403		-0.87%
	2012-13		21,763		-2.86%
	2013-14		21,546		-1.00%
	2014-15		21,389		-0.73%
	2015-16		21,206		-0.86%
	2016-17		20,995		-0.99%
	2017-18		20,652		-1.63%
	2018-19		20,237		-2.01%
	2019-20	19,210	19,210	19,210	-5.07%
	2020-21	18,050		18050	-6.04%
	2021-22	17,096		16,831	-5.29%
	2022-23	16,454		16,209	-3.75%
	2023-24	16,092		15,820	-2.21%
	2024-25	15,931		15,603	-1.00%
	2025-26	15,796		15,298	-0.85%

Need Help?
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November 2023