



Susan L. Edwards, Ph.D.
President
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November 12, 2020

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Dear AAUP-WSU Executive Committee,

I am writing to notify you, pursuant to Articles T17 and N17 of our collective bargaining agreement ("CBA"), that the University anticipates the need for retrenchment of Bargaining Unit Faculty Members.

The basis for invoking retrenchment is outlined in the attached communication from Provost Leaman to me. I have reviewed the material and concur with his recommendation, with one exception. The data reflects that Lake Campus has not experienced significant reduction in enrollment. As a result, Lake Campus will not be included in the anticipated retrenchment.

In this communication and the accompanying attachments, the University is providing the AAUP-WSU with the relevant data and information pertaining to the anticipated need to retrench. The Provost's communication also identifies the University's appointments to the "Joint Committee on Retrenchment" referenced in CBA section 17.4. The University's three members will be Dr. Barry Milligan, Dr. Marlena Akhbari, and Dr. Eric Bennett. We believe 14 calendar days to be ample time for the AAUP-WSU to appoint its three members. Thus, the University will consider the joint committee's 60-calendar-day working period to begin on or about November 30, 2020. Recognizing university offices will be officially closed for several days during this period, the advisory recommendations formulated by the Joint Committee should be provided to me by approximately February 9, 2021. I will thereafter convey those recommendations to the Board of Trustees along with my own, as per the CBA.

I trust you will understand that this is not an easy decision for the University, and one that we most definitely do not undertake lightly. The University has, for many months, been actively considering in good faith whether the need for retrenchment could be alleviated through normal attrition or other alternatives, as Section 17.6.1 of the CBA instructs. We have shared these considerations openly and sought further discussions with the unions. You are likewise aware of the implementation of the many non-bargaining-unit initiatives to right-size the University, eliminate or not fill administrative positions, control expenses, align limited resources to critical needs, and enable us to continue fulfilling our educational mission. Regrettably, I see no viable alternative to initiating the retrenchment process at this time.

Sincerely,

Sue Edwards
President



November 10, 2020

Douglas Leaman, Ph.D.
Interim Executive Vice President
for Academic Affairs
and Provost

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Dear President Edwards,

I am writing to notify you, in my capacity as the interim Provost and Chief Academic Officer of the University, that I anticipate the need for retrenchment of Bargaining Unit Faculty Members.

As set forth in Articles T17 and N17 of our collective bargaining agreement ("CBA") with the AAUP-WSU, "Retrenchment is defined as the termination of a Bargaining Unit Faculty Member(s) during any appointment as a result of any of the following three circumstances: (1) financial exigency; (2) significant reduction in enrollment of a College, Department, or Program (here and elsewhere, meaning a program offered for credit) continuing over four or more academic semesters (not counting summer) and which is expected to persist; or (3) discontinuation of a College, Department or Program."

It is circumstance #2 that applies to my specific recommendation. The University has experienced a significant reduction in enrollment over at least four semesters, and we expect that reduction to persist. The enrollment data underlying my anticipated need for retrenchment are included as Attachment A hereto.

Section 17.4 of the CBA calls for the establishment of a six-member "Joint Committee on Retrenchment," with three members to be appointed by the University. It is my recommendation the following individuals be considered as the University's appointees to the referenced Committee: Dr. Barry Milligan, Dr. Marlena Akhbari, and Dr. Eric Bennett.

I know you understand that this matter is one that we do not undertake lightly and that the University has, for many months, been actively considering in good faith whether the need for retrenchment could be alleviated through normal attrition or other alternatives, just as Section 17.6.1 of the CBA instructs. We have shared these considerations openly and sought further discussions with the union. You are likewise aware of the implementation of the many non-bargaining-unit initiatives to right-size the University, eliminate or not fill administrative positions, control expenses, align limited resources to critical needs, and enable us to continue fulfilling our educational mission. Those efforts remain in place. Initiating Retrenchment at this time is needed as a result of the significant reductions in enrollment that have occurred and are expected to persist.

Sincerely,

Douglas W. Leaman
Interim Provost

Wright State University Historical Enrollment

Student Headcount

COLLEGE_DIVISION	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
Lake Campus (LAKE)	770	820	985	1075	1096	1080	1078
College of Science & Mathematics (COSM)	2344	2397	2259	2141	2048	1854	1744
Raj Soin College of Business (RSCB)	2475	2448	2466	2463	2315	2023	1759
College of Educ & Human Svcs Admin (CEHS)	2431	2376	2287	2129	1919	1728	1622
College of Nursing & Health (CONH)	1401	1494	1450	1434	1298	1124	936
College of Liberal Arts (COLA)	3384	3296	3147	2938	2647	2263	1996
College of Engineerg & Computer Sci (CECS)	3366	3615	3439	3037	2562	2163	1884

Student headcount includes all students enrolled on the fall census dates. Students may appear in more than one college if they are pursuing dual degrees or dual majors. For example, a student pursuing a bachelor's degree in art and accounting will be counted once in each college (COLA and RSCB). Headcounts are shown for BUFM colleges only.

Wright State University

Headcount Enrollment Forecasts for Fiscal Years 2022, 2023, and 2024

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A series of analyses were conducted by representatives from the Office of Institutional Research and Effectiveness and the Statistical Consulting Center in the Fall of 2020 to forecast student headcount enrollments for Wright State University for fiscal years 2022 (Fall 2021), 2023 (Fall 2022), and 2024 (Fall 2023). A total of three analyses were conducted using different methodologies (models). For each analyses, the sample of students included tuition-generating, census date student headcount enrollments. Professional medical (MD) student headcount enrollments were excluded from all three analyses.

Model 1

Trend analyses of fall semester student headcount enrollments from 2013 to 2020 were conducted with a focus on entering student cohort fall-to-fall headcount enrollment patterns to forecast headcount enrollments for Fall 2021, Fall 2022, and Fall 2023. Entering student cohorts were defined in accordance with [The Wright Guarantee Tuition Program](#). Total fall headcounts were derived by estimating entering cohort headcounts (i.e., a Wright Guarantee cohort) and continuing cohort headcounts (i.e., returning students by prior year Wright Guarantee cohort) for three categories of students: College Credit Plus students, undergraduate students, and graduate/professional students.

Two analyses were conducted: Models 1A and 1B. For both models, continuing cohort headcounts were calculated based upon average trends in year-to-year cohort headcount enrollment changes (e.g. from year one to year two, year two to year three, etc.) over a seven-year period. Forecasted entering cohort headcounts for Models 1A and 1B were derived differently. For Model 1A, entering cohort headcounts were derived based upon the highest gain in fall-to-fall enrollments of entering cohort headcounts over the past seven years; whereas, for Model 1B, entering cohort headcounts were derived based upon the lowest gain in fall-to-fall enrollments of entering cohort headcounts over the past seven years. Table 1 displays a summary of actual and forecasted headcount enrollments by student category.

Table 1

Model 1 Actual and Forecasted Fall Student Headcount Enrollments by Student Category

Student category	Model	Fall										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CCP	Actual	407	354	504	804	934	876	895	798			
	1A									808	892	995
	1B									644	529	436
UG	Actual	13,127	13,049	13,067	12,717	12,267	11,153	9,768	8,768			
	1A									7,876	7,155	6,553
	1B									7,696	6,697	5,781
GR	Actual	3,433	3,666	3,874	3,700	3,351	2,961	2,501	2,145			
	1A									1,938	1,795	1,680
	1B									1,875	1,632	1,413

(continued)

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Headcount Enrollment Forecasts for Fiscal Years 2022, 2023, and 2024
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Table 1 (continued)

Student category	Model	Fall										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total	Actual	16,967	17,069	17,445	17,221	16,552	14,990	13,164	11,711			
	1A									10,622	9,842	9,228
	1B									10,215	8,858	7,630

Note. CCP = College Credit Plus students. UG = undergraduate students. GR = graduate/professional students. Actual = actual enrollments. 1A = Model 1A. 1B = Model 1B.

Figure 1 displays the total actual and forecasted headcount enrollments from Model 1 trend analyses.

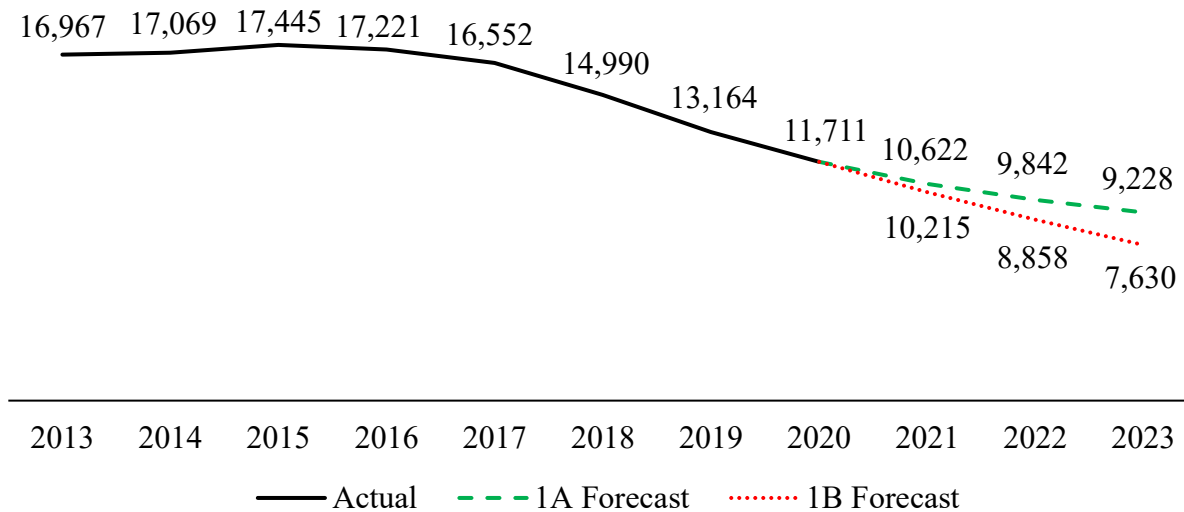


Figure 1. Model 1 actual and forecasted total fall student headcount enrollments.

Model 2

The second set of analyses examined enrollment trends of student headcount enrollments for summer, fall, and spring semesters from calendar years 2016 to 2020. Enrollment patterns of four groups of students (new, transfer, readmitted, and continuing) were evaluated by campus (i.e., students enrolled exclusively at the Dayton campus, students enrolled exclusively at the Lake campus, and students enrolled at both the Dayton and Lake campuses) and by six student categories: College Credit Plus students, domestic undergraduate students, international undergraduate students, domestic graduate students, international graduate students, and School of Professional Psychology students. The most recent trend in headcount enrollment patterns from spring to summer, fall to fall, and fall to spring, were used to forecast headcount enrollments for summer, fall, and spring semesters, respectively, for fiscal years 2022, 2023, and 2024. Table 2 displays the actual and forecasted headcounts for fall semesters by student category.

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Table 2

Model 2 Actual and Forecasted Fall Student Headcount Enrollments by Student Category

Student category	Fall							
	Actual enrollments				Forecasted enrollments			
	2016	2017	2018	2019	2020	2021	2022	2023
CCP	804	934	876	895	798	763	780	843
UG Dom	12,233	11,892	10,854	9,548	8,605	7,864	7,408	7,458
UG Intl	484	375	299	220	163	118	88	66
GR Dom	2,601	2,534	2,364	2,003	1,749	1,533	1,351	1,195
GR Intl	968	682	469	384	286	223	180	148
SOPP	131	135	128	114	110	106	102	99
Total	17,221	16,552	14,990	13,164	11,711	10,607	9,909	9,809

Note. CCP = College Credit Plus students. UG Dom = domestic undergraduate students. UG Intl = international undergraduate students. GR Dom = domestic graduate students. GR Intl = graduate international students. SOPP = School of Professional Psychology students.

Figure 2 displays the total actual and forecasted headcount enrollments from Model 2 trend analyses.

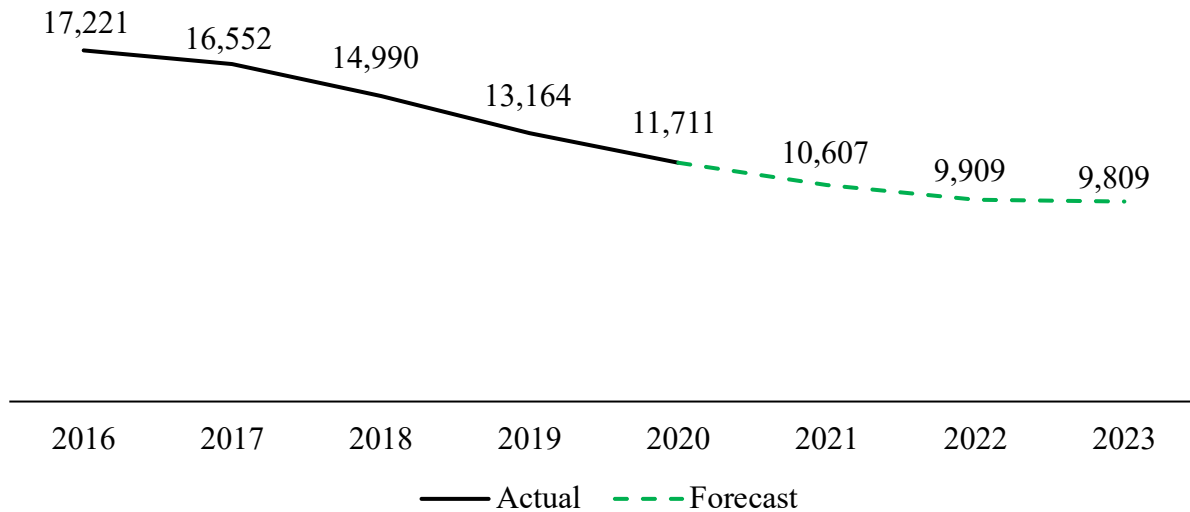


Figure 2. Model 2 actual and forecasted total fall student headcount enrollments.

Model 3

For the third set of analyses, a series of Markov chain models were run to forecast total student headcount enrollments for fall semesters. Markov chains are used to predict probabilities of transitioning from a given state to any number of other states, and have recently been used in higher education to forecast headcount enrollments (Gandy et al., 2019). For the current analyses, the transition states from one fall semester to a subsequent fall semester included nine student credit hour (SCH) bins and an exit state (i.e., failing to enroll the subsequent fall semester either due to attrition or graduation). The fall-to-fall headcount enrollment patterns of

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four groups of students were analyzed: College Credit Plus students, undergraduate students, graduate students, and School of Professional Psychology students.

An underlying assumption of the Markov chain process is that it is memoryless, meaning the probabilities of transitioning to any future states are based solely on the baseline transition period. For example, probabilities from a baseline transition period or year (e.g., from Fall 2013 to Fall 2014) are used to forecast future enrollments for three subsequent fall terms (e.g., Fall 2015, Fall 2016, and Fall 2017) without taking into account any past trends. The only factors used to forecast headcount enrollments are (a) the probabilities of transitioning to a future state as derived from the baseline year (e.g., from Fall 2013 to Fall 2014), (b) the number of students in each SCH bin for a given fall semester (e.g., Fall 2013), and (c) the number of incoming students in each transition state in the subsequent fall semester (e.g., Fall 2014).

A total of six models were conducted, each using a different fall-to-fall transition from the past eight years (2013 to 2020). Because each model forecasted headcount enrollments for three subsequent fall semesters, it was possible to compare forecasted headcount enrollments to actual headcount enrolments. Table 3 provides a comparison of the actual total student headcount enrollments and the three-year total forecasted headcounts for each of the six Markov chain models.

Table 3

Model 3 Actual and Forecasted Fall Total Student Headcount Enrollments

Model	Fall								
	2015	2016	2017	2018	2019	2020	2021	2022	2023
Actual	17,445	17,221	16,552	14,990	13,164	11,711			
13-14	15,984	15,417	15,119						
% Difference	-8.37	-10.48	-8.66						
14-15		16,481	16,052	15,801					
% Difference		-4.30	-3.02	5.41					
15-16			16,291	15,490	15,045				
% Difference			-1.58	3.34	14.29				
16-17				15,724	14,798	14,258			
% Difference				4.90	12.41	21.75			
17-18					14,401	13,067	12,320		
% Difference					9.40	11.58			
18-19						12,486	11,054	10,209	
% Difference						6.62			
19-20							11,086	9,891	9,235

Note. Each Markov chain model is named after the baseline year used to forecast headcount enrollments (e.g., 13-14 = Fall 2013 to Fall 2014 transition period). Actual = actual enrollments.

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Figure 3 displays the total actual and forecasted headcount enrollments from the Model 3 Markov chain analyses.

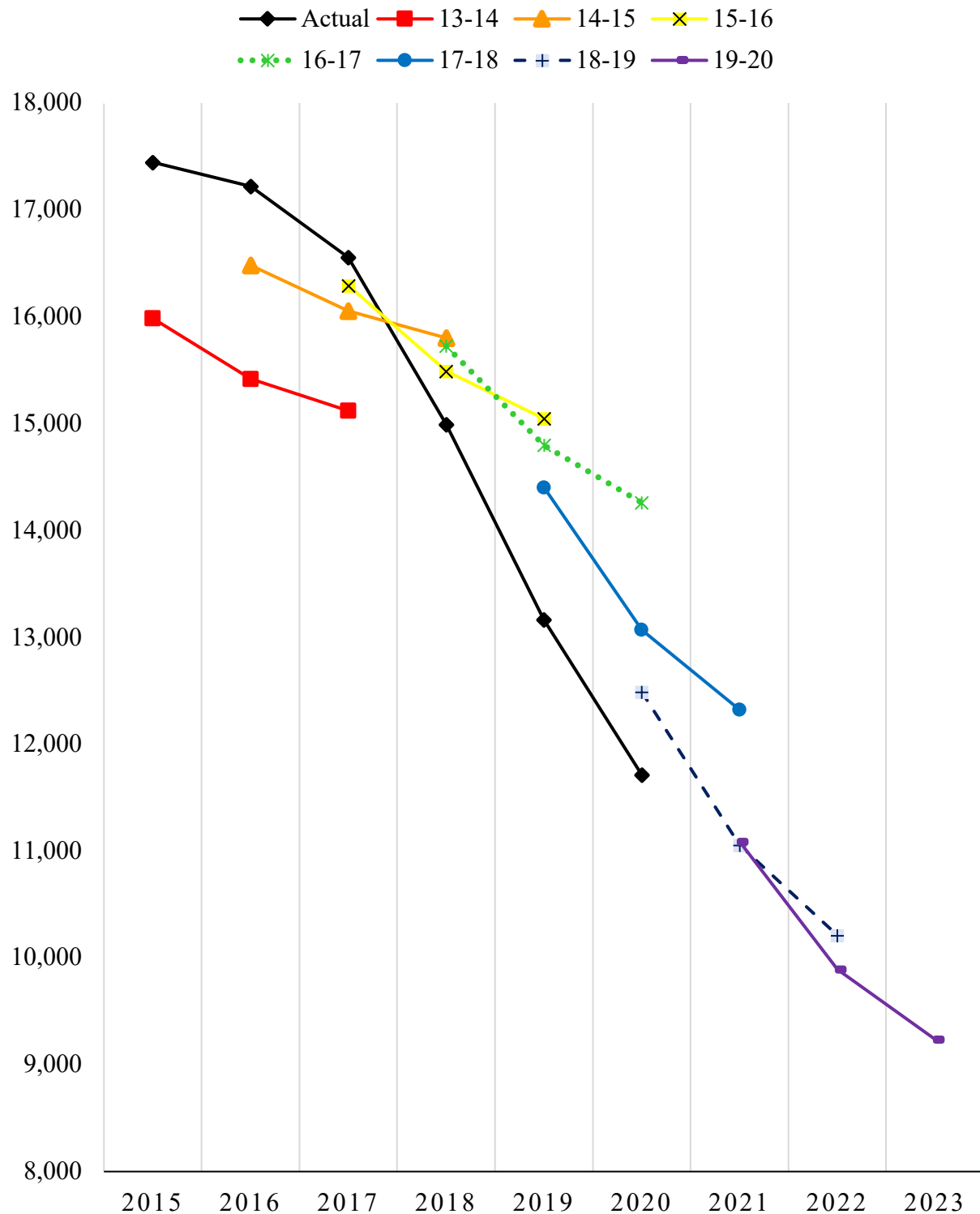


Figure 3. Model 3 actual and forecasted total fall student headcount enrollments.

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Summary

Table 4 contains the forecasted total student headcount enrollments for Fall 2021, Fall 2022, and Fall 2023 from each of the three analyses (models).

Table 4

Forecasted Fall Student Headcount Enrollments by Model

Model	Fall		
	2021	2022	2023
Model 1A	10,622	9,842	9,228
Model 1B	10,215	8,858	7,630
Model 2	10,607	9,909	9,809
Model 3 17-18	12,320	-	-
Model 3 18-19	11,054	10,209	-
Model 3 19-20	11,086	9,891	9,235

References

Gandy, R., Crosby, L., Luna, A., Kasper, D., & Kendrick, S. (2019). Enrollment projection using Markov chains: Detecting leaky pipes and the bulge in the boa. *The AIR Professional File*, Fall 2019, 21-38. <https://doi.org/10.34315/apf1472019>