UW-Madison Faculty Retirement Patterns and Projections: 2010-11 Update

In an idealized university, new faculty members are generally hired in their early 30s and retire in their mid 60s. If they spent their careers at UW-Madison and retired after 30-35 years of service, approximately 33% of the faculty would turnover every 10 years. If retiring faculty members are replaced with young, early career faculty members then this renewal cycle is stable from year to year.

There are both costs and benefits to faculty retirements. Retirements of higher salary faculty members can result in significant salary savings but these savings might be offset in part by high recruitment and startup costs for new faculty. The loss of retiring faculty members' expertise and wisdom might be balanced by the opportunity to explore new academic directions. Understanding faculty turnover patterns, including those related to retirements, contribute to the development of meaningful staffing plans.

We periodically examine the age distribution of faculty and their retirement patterns and make predictions for near-future retirements in order to evaluate the stability of the renewal cycle. Compared to the idealized university of the 1970s, there is evidence that the faculty renewal cycle is not stable. Faculty members are retiring at historically low rates and the overall age of the faculty is increasing. Older faculty members are not evenly distributed between school and colleges and departments.

Summary of Findings

1. Since the mid 1970s, the average age of UW-Madison faculty members has increased by more than five years (from 45.0 in 1976 to 50.4 in 2010). Between 2000 and 2010, the average age of faculty members increased by 1.3 years, from 49.1 to 50.4. The size of the faculty in 2010 is the same as in 2000 but between 2000 and 2010, the number of faculty over age 55 increased by 21% (from 686 to 827).The number of faculty age 65 and older increased by 62% (from 121 to 196) between 2000 and 2010.

2. In this study, the faculty retirement rate is defined as the proportion of faculty age 55 and over whose faculty appointments ended in a particular year. Between 1990 and 2010, an average of 10% of faculty age 55 and over retired each year.

3. Since 2002, faculty members have been retiring at an average rate of 8%, slightly lower than the historical average of 10%. Faculty have also been retiring at lower rates than predicted in previous analyses in 2003 and 2007.

4. Compared to the previous four year period (2002-2006), the proportion of faculty who retired between 2006 and 2010 increased on both ends of the age spectrum. There was an increase in the proportion of faculty retirees in the 55-59 age group (19% in 2002-2006 compared to 23% in 2006-2010). There was also an increase in the proportion of faculty retirees in the 70 and over age group (11% in 2002-2006 and 17% in 2006-2010).

5. The current age distribution of the faculty differs among UW-Madison's schools and colleges. Overall, 38% of faculty members are age 55 and over. The proportion of faculty age 55 and over ranges from 76% in the School of Nursing to 28% in the School of Pharmacy.

6. Slight increases in the number of faculty retirements are predicted in the next ten years compared to the past decade. These increases result from the fact that the faculty overall is older than in the past and because older faculty generally retire at higher rates than younger faculty. Because of differences in the age distribution of faculty between schools and colleges, future retirements will impact schools and colleges differently. Overall, 36% of UW-Madison faculty members are predicted to retire in the next 10 years with ranges from 71% of current faculty in the School of Nursing to 22% in the School of Pharmacy.

Faculty Retirement Trends

In the late 1990s there was a growing concern, both nationally and locally, about the "graying of the faculty". Anxiety about the aging of the faculty led to predictions of mass retirements. In 1997, Margaret Harrigan (Academic Planning and Analysis) conducted a study of UW-Madison faculty retirements over the previous ten years and developed a methodology to project future retirements. In contrast to the prevailing lore at the time Harrigan's model resulted in predictions of only modest increases in faculty retirements over the next 10 years. Updates to the 1997 study were completed in 2003 and 2007 using the same methodology. Both modeling exercises resulted in essentially the same conclusions, namely that immediate future retirements would not deviate much from past retirement patterns. Now, four years have passed and we are again analyzing faculty retirement patterns and making new projections.

This report is based on an analysis of UW-Madison faculty from October 1990 through October 2010. For the purposes of this report, retirement is defined as all faculty age 55 and over whose faculty appointments ended during the period of time described. Specific methodological details are given in the "Methodology" section at the end of this report.

Chart 1 (details in Appendix 1) shows the retirement rate for faculty members age 55 and over as well as the total number of faculty members. Between 1990 and 2010 the average retirement rate for faculty members over 55 was 10%. The annual retirement rates during this time period fluctuated between a high of 15% in 1995-96 to a low of 7% in 2009-10.

Chart 1
UW-Madison Faculty Retirement Rate and Number of Faculty Retirements by Year

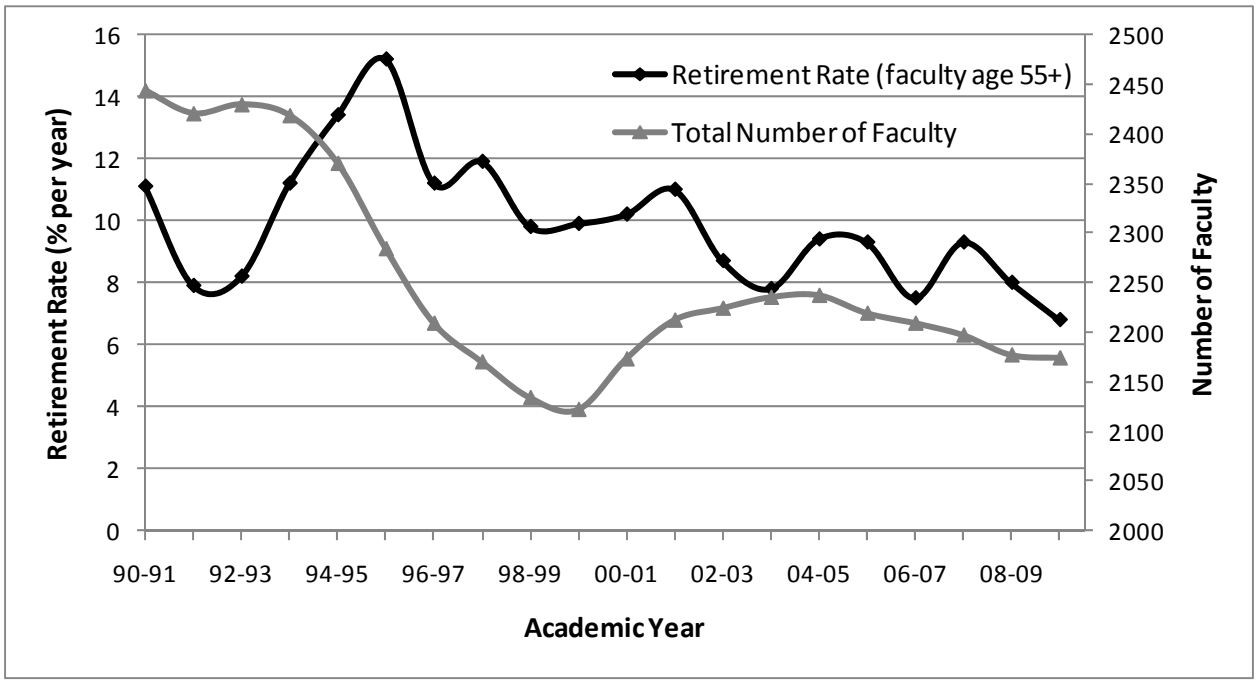


Chart 2 shows the number of UW-Madison faculty, age 55 and over, who retired in each year between 1990 and 2010. A total of 1,388 faculty members retired in this time period. During these years, an annual average of 7% of faculty age 55-64 retired and, on average, 24% of faculty age 65 and over retired.

Chart 2
Number of UW-Madison Faculty Retirements by Year of Retirement

*Early retirement incentives were available for a short time in 1989-90. In 1994-95, a post-retirement plan was implemented to allow retired faculty to teach part-time for a few years after retirement.

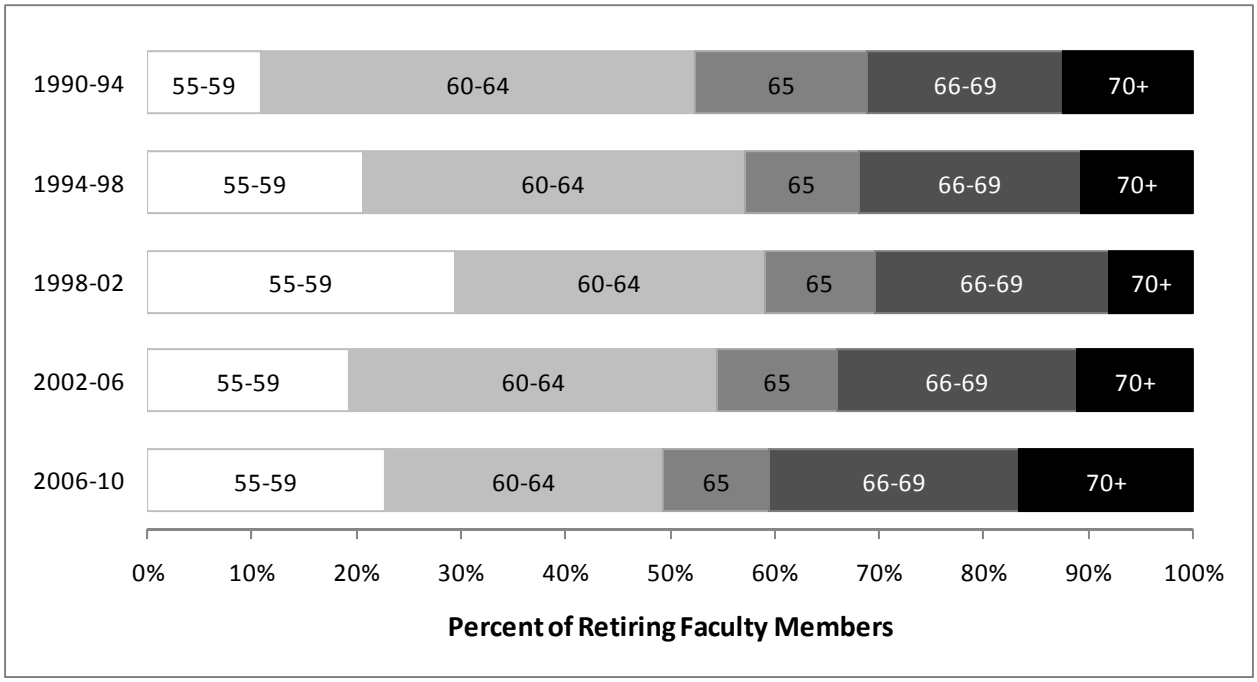
Age Distribution of Retiring Faculty Members

Chart 3 (details in Appendix 2) show the distribution of faculty by age at retirement, grouped into four year periods. In each of the first three periods (1990-1994, 1994-1998, and 1998-2002) there was a general trend of faculty retiring at younger ages than in the past and a decrease in the proportion of faculty who were over age 70 at retirement compared to previous time periods.

During the period 2002-2006, the trending towards younger retirements changed. Compared to the previous periods, there was a decrease in 55-59 year old faculty retiring and marked increases in the proportion of faculty retirees who were in the 60-64 and over 70 age groups.

During the most recent four year period, 2006-2010, the trend has again changed. The proportion of faculty retirees who are 55-59 increased. This increase was offset by decreases in the proportion of 60-65 year old faculty who retired. During the same period, there was a slight increase in the proportion of faculty retirees who were 66-69 and a pronounced increase in the proportion who were 70 or older.

Chart 3
Distribution of UW-Madison Faculty by Age at Retirement



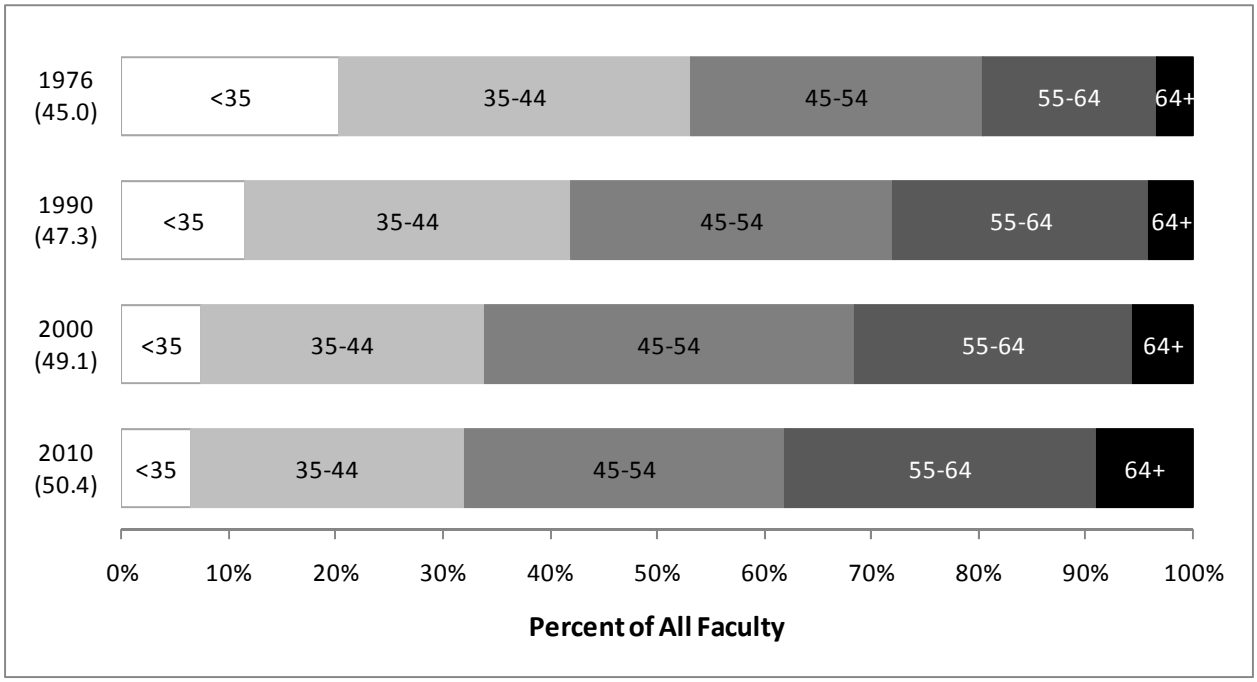
Age Distribution of All Faculty Members

Chart 4 (details in Appendix 3) show the distribution of faculty by age in 1976, 1990, 2000 and 2010. Since 1976 there has been a decrease in the proportion of faculty members who are under 35 and an increase the proportion who are 55 or older. Although the most dramatic changes occurred between 1976 and 1990, the age distribution has continued to shift towards older faculty.

Between 2000 and 2010, the proportion of faculty in the under 50 age group decreased. The one exception is the 35-39 year old age group which saw an increase of 40 faculty members between 2000 and 2010. The proportion of faculty in the 50-54 year old age group remained constant. The proportion of faculty in the 55 and over age groups all increased.

Since 1976, the average age of UW-Madison faculty members has increased by 5.4 years – from 45.0 years in 1976 to 50.4 years in 2010. Between 1976 and 1990, the average age of faculty increased by 2.3 years. Since 1990, the average age of faculty has increased by 3.1 years to 50.4.

Chart 4
Distribution of UW-Madison Faculty by Age Group
October 1976, 1990, 2000, and 2010



*The average age of faculty members is shown in parentheses.

Older Faculty Members by School/College and Department

Chart 5 and Table 6 show the number and proportion of faculty age 55 and older by school/college. These figures show that the distribution of faculty by age is not even among the schools/colleges. In 2010, 38% of the overall faculty members were age 55 or older. Higher proportions (43% or more age 55 and older) of older faculty are found in the School of Nursing, Division of Continuing Studies, School of Veterinary Medicine, and College of Agricultural and Life Sciences.

Higher proportions of younger faculty (33% or fewer age 55 and older) are found in the School of Pharmacy, College of Engineering, and Nelson Institute. Near average proportions of older faculty (34%-42%) are found in the Law School, School of Business, College of Letters and Science, School of Human Ecology, School of Education, and School of Medicine and Public Health.

In 2010, 9% of faculty members were age 65 or older. The Nelson Institute, School of Nursing, School of Medicine and Public Heath, Law School, School of Business, and School of Veterinary Medicine each have at least 10% of faculty age 65 and older AND more than one faculty member in this category.

Chart 5
Older Faculty by School/College
October 2010 (Sorted in Descending Order by Percent Age 55 and Older)

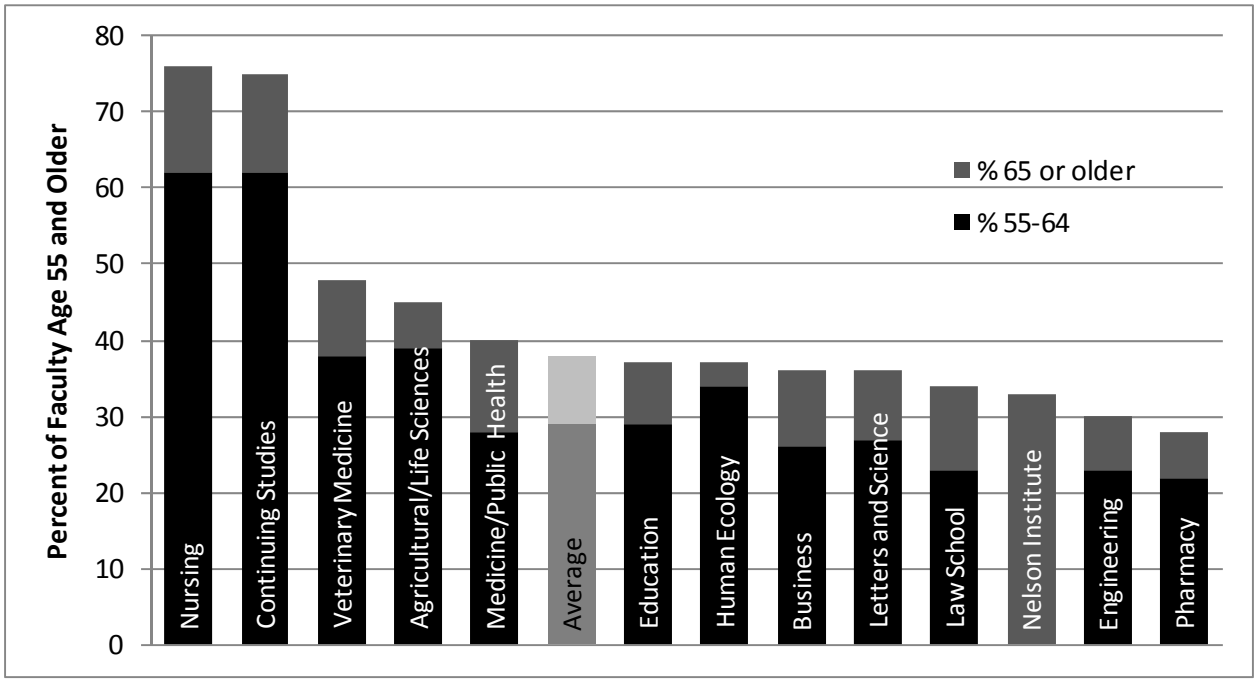


Table 6
Older Faculty by School/College
October 2010 (Sorted in Descending Order by Percent Age 55 and Older)

		Total	Age 55 and Older		Age 65 and Older	
		#	#	%	#	%
A54	School of Nursing	21	16	*76*	3	*14*
A93	Division of Continuing Studies	8	6	*75*	1	*13*
A87	School of Veterinary Medicine	52	25	*48*	5	*10*
A07	College of Agricultural and Life Sciences	294	132	*45*	19	*6*
A53	School of Medicine and Public Health	409	162	*40*	48	*12*
	University Total	**2,173**	**827**	***38***	**196**	***9***
A17	School of Education	145	53	*37*	12	*8*
A27	School of Human Ecology	38	14	*37*	1	*3*
A12	School of Business	77	28	*36*	8	*10*
A48	College of Letters and Science	861	307	*36*	75	*9*
A45	Law School	38	13	*34*	4	*11*
A40	Nelson Institute for Environ. Studies	9	3	*33*	3	*33*
A19	College of Engineering	186	56	*30*	13	*7*
A56	School of Pharmacy	32	9	*28*	2	*6*

*There are three faculty members who are each the sole faculty member in their units. These units are not shown individually but the faculty members are included in the totals and overall averages.

Table 7 compares schools/colleges by the number and percentage of faculty age 55 and over between 2006 (when we last analyzed this topic) and 2010. Although there are fewer faculty members age 55 and over in 2010 than there were in 2006, the percentage of faculty age 55 and over increased by five percentage points.

Compared to the overall increase of five percentage points, four schools/colleges have increases higher than average. The School of Nursing, which already had a much higher than average proportion of older faculty in 2006, had an even higher percentage of faculty age 55 or over in 2010. Between 2006 and 2010, the proportion of faculty in the School of Nursing increased from 60% to 76%. Only the Law School and Nelson Institute had decreases in the percentage of faculty age 55 and older.

Table 7
Change in Older Faculty by School/College between 2006 and 2010
Sorted by Percentage Point Change in Faculty Age 55 and Over

		Faculty Age 55 or Older					
		October 2006		October 2010		Change 06-10	
		#	%	#	%	#	% pt.
A54	School of Nursing	12	*60*	16	*76*	+4	*+16*
A12	School of Business	20	*26*	28	*36*	+8	*+10*
A07	College of Agricultural and Life Sciences	111	*36*	132	*45*	+21	*+9*
A87	School of Veterinary Medicine	22	*42*	25	*48*	+3	*+6*
	University Total	**2,208**	***33***	**2,173**	***38***	**-35**	***+5***
A17	School of Education	48	*33*	53	*37*	+5	*+5*
A48	College of Letters and Science	279	*31*	307	*36*	+28	*+5*
A53	School of Medicine and Public Health	146	*36*	162	*40*	+16	*+4*
A19	College of Engineering	48	*27*	56	*30*	+8	*+3*
A27	School of Human Ecology	13	*36*	14	*37*	+1	*+1*
A93	Division of Continuing Studies	9	*75*	6	*75*	-3	*0*
A56	School of Pharmacy	8	*28*	9	*28*	+1	*0*
A45	Law School	16	*40*	13	*34*	-3	*-6*
A40	Nelson Institute for Environ. Studies	3	*43*	3	*33*	0	*-10*

Table 8 compares departments on the number and percentage of faculty age 55 and over between 2006 (when we last analyzed this topic) and 2010. The departments of Linguistics and Dermatology have had increases in the proportion of faculty members over age 55 of 40 or more percentage points. Three departments (Pathobiological Sciences, Neurology, and Forest and Wildlife Ecology) have had decreases in the proportion of faculty member over age 55.

Appendix 4 shows the number and proportion of faculty members age 55 and older and age 65 and older by department. That list is sorted in descending order by the proportion age 55 and older.

Table 8
Change in Older Faculty by Department between 2006 and 2010
For Departments with More than 50% of Faculty Over Age 55 in Either 2006 or 2010
Sorted by Percentage Point Change in Faculty Age 55 and Over

	Faculty Age 55 or Older					
	October 2006		October 2010		Change 06-10	
	#	%	#	%	#	% pt.
A4852 Linguistics	7	*43*	5	*100*	-2	*+57*
A5343 Dermatology	6	*17*	7	*57*	+1	*+40*
A5347 Medical Microbiology	12	*42*	12	*67*	0	*+25*
A5309 Anesthesiology	6	*33*	7	*57*	+1	*+24*
A4860 School of Music	48	*42*	47	*64*	-1	*+22*
A0730 Biochemistry	33	*52*	32	*72*	-1	*+20*
A0754 Soil Science	21	*38*	18	*56*	-3	*+18*
A5450 Nursing	20	*60*	21	*76*	+1	*+16*
A0742 Genetics	15	*40*	16	*56*	+1	*+16*
A5360 Ophthalmology and Visual Science	14	*43*	17	*59*	+3	*+16*
A5363 Pathology	19	*42*	18	*56*	-1	*+14*
A0728 Bacteriology	22	*41*	20	*55*	-2	*+14*
A4806 African Languages and Literature	9	*44*	7	*57*	-2	*+13*
A5381 Physiology	19	*42*	19	*53*	0	*+11*
A4835 German	16	*44*	15	*53*	-1	*+9*
A1995 Engineering Professional Develop.	5	*60*	6	*67*	+1	*+7*
A5359 Oncology	17	*47*	19	*53*	+2	*+6*
A4808 Afro-American Studies	8	*63*	8	*63*	0	*0*
A8731 Pathbiological Sciences	17	*59*	19	*58*	+2	*-1*
A5351 Neurology	9	*56*	11	*45*	+2	*-9*
A0764 Forest and Wildlife Ecology	13	*54*	22	*41*	+9	*-13*

*Includes departments with 5 or more faculty members in both 2006 and 2010.

Predictions of Future Faculty Retirements

We use the information presented in earlier part of this analysis – namely the size and age of the current faculty and recent rates of retirement by age – to predict faculty retirements for the next ten years (see complete methodology section after the Appendices). In an idealized and predictable faculty renewal cycle, where faculty are hired in their early 30s and serve 30-35 years at UW-Madison before retiring, approximately 33% of the faculty will turn over every 10 years. Updated projections show that, over the next 10 years, 36% of the faculty in 2010 will retire (Chart 9, Table 10). This is slightly higher than the idealized average of 33%.

The predicted retirement rate of 36% over the next ten years means that 789 of the 2,173 faculty in October 2010 will retire by 2020. Retirement predictions range from a low of 22% in the School of Pharmacy to 71% in the School of Nursing.

Chart 9
Predicted Faculty Retirements by School/College
2010-2020 (Sorted in Descending Order by the Percent Predicted to Retire)

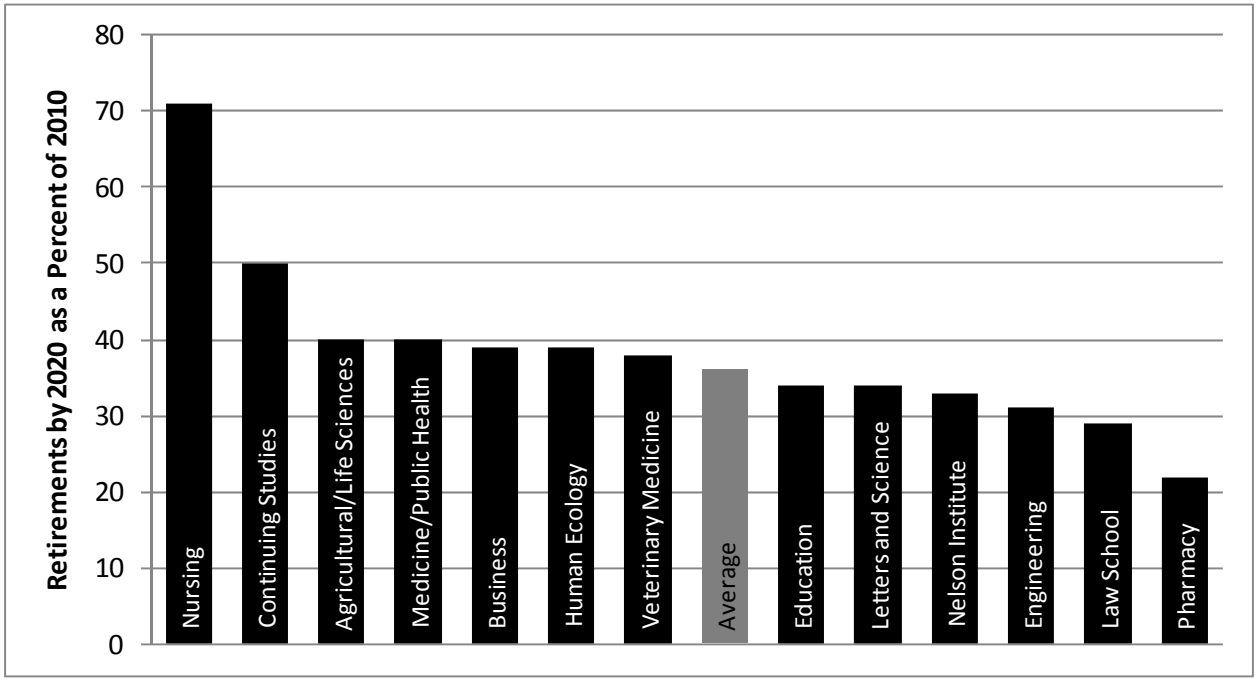


Table 10
Predicted Faculty Retirements by School/College
2010-2020 (Sorted in Descending Order by the Percent Predicted to Retire)

		Current Faculty (Oct. 2010)	Predicted Retirements	Retirements as % of Current Faculty
A54	School of Nursing	21	15	*71*
A93	Division of Continuing Studies	8	4	*50*
A07	College of Agricultural and Life Sciences	294	118	*40*
A53	School of Medicine and Public Health	409	162	*40*
A12	School of Business	77	30	*39*
A27	School of Human Ecology	38	15	*39*
A87	School of Veterinary Medicine	52	20	*38*
	University Total	**2,173**	**789**	***36***
A17	School of Education	145	49	*34*
A48	College of Letters and Science	861	296	*34*
A40	Nelson Institute for Environ. Studies	9	3	*33*
A19	College of Engineering	186	57	*31*
A45	Law School	38	11	*29*
A56	School of Pharmacy	32	7	*22*

*There are three faculty members who are each the sole faculty member in their units. These units are not shown individually but the faculty members are included in the totals and overall averages.

Interpretation and Conclusions

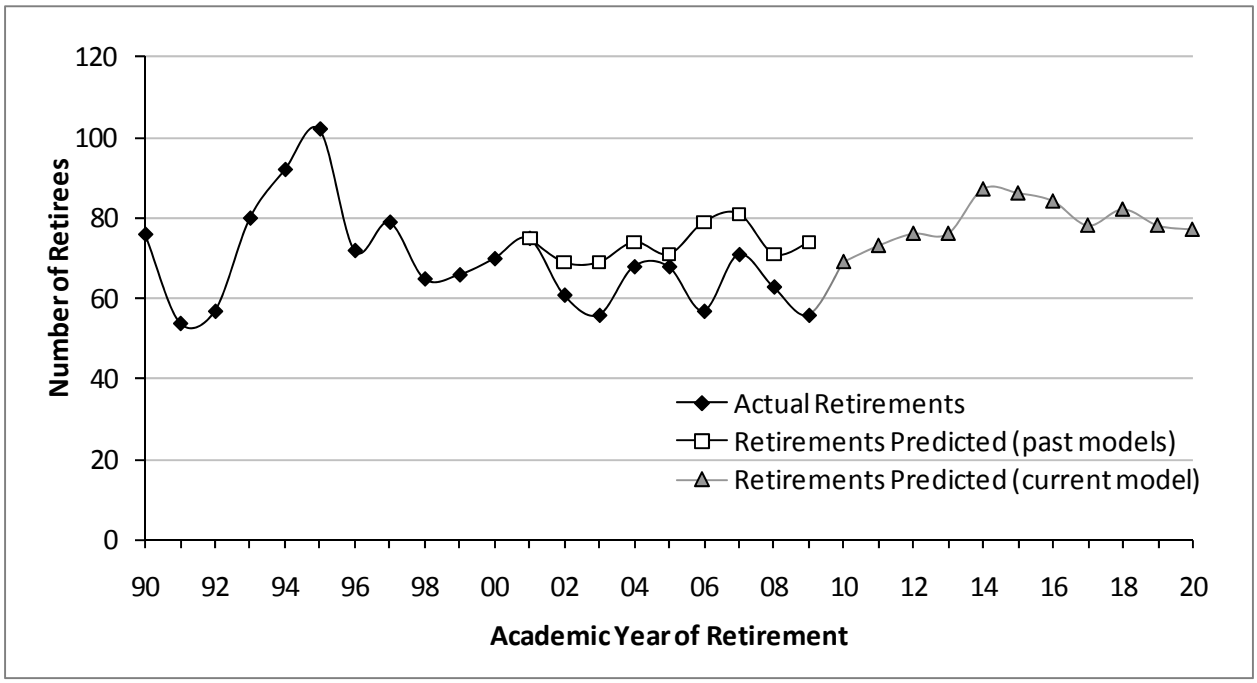
Chart 11 shows actual retirements from 1990 through 2010, predicted retirements through 2020 and a comparison of actual retirements to the number predicted in the 2001 and 2007 reports on faculty retirements. Based on recent rates of retirement and the increased age of current faculty members, the number of faculty retirements is predicted to increase above current rates.

There is some evidence of instability in the faculty retirement/renewal cycle. This report shows that there has been a change both in retirement behavior AND in the age distribution of the faculty. Over the past eight years, faculty have postponed retirement, retiring at lower rates than predicted and at lower rates than the previous ten years. At the same time, the faculty who do retire are older than in the past.

The application of average recent retirement rates to the current faculty (considering age) determines projections of the number of faculty retirees into the near future. Because the retirement projections are based on the most recent past retirement behavior and because that rate has decreased, we might expect the projections of faculty retirements to show future decreases. However, the projections predict slight increases; exactly the opposite of what might seem intuitive. The reason for this is because decreases in the overall rate of retirements in past years have increased the age of the remaining faculty. Older faculty generally retire at higher rates than younger faculty; therefore, there will be more older faculty available to retire in future years.

Twenty four UW-Madison departments have half or more of their faculty who are age 55 or over. These departments can expect higher than average retirement rates in the coming years. Deans and department chairs should anticipate and plan for these changes so that the potential negative effects of these likely retirements on both the department and university as a whole can be mitigated.

Chart 11
Actual and Predicted Faculty Retirements by Year of Retirement



Appendices

Appendix 1
Number of UW-Madison Faculty Retirements by Year of Retirement and Age Group

	Total Retirees Age 55 and Over			Retirees 55-64		Retirees 65 & Over	
	#	Mean Age at Retirement	% 55+ Retiring	#	% 55-64 Retiring	#	% 65+ Retiring
1990-91	76	64.6	*11*	36	*6*	40	*41*
1991-92	54	64.4	*8*	31	*5*	23	*25*
1992-93	57	63.6	*8*	30	*5*	27	*27*
1993-94	80	64.5	*11*	43	*7*	37	*32*
1994-95	92	63.5	*13*	57	*10*	35	*33*
1995-96	102	63.7	*15*	56	*10*	46	*42*
1996-97	72	63.6	*11*	39	*7*	33	*32*
1997-98	79	63.0	*12*	45	*8*	34	*33*
1998-99	65	62.3	*10*	46	*8*	19	*18*
1999-00	66	63.2	*10*	35	*6*	31	*26*
2000-01	70	62.9	*10*	42	*7*	28	*23*
2001-02	76	63.0	*11*	41	*7*	35	*28*
2002-03	61	64.4	*9*	29	*5*	32	*23*
2003-04	56	63.2	*8*	33	*6*	23	*16*
2004-05	68	63.5	*9*	38	*7*	30	*19*
2005-06	68	64.3	*9*	38	*7*	30	*19*
2006-07	57	63.3	*8*	29	*5*	28	*15*
2007-08	71	63.8	*9*	36	*6*	35	*19*
2008-09	63	65.4	*8*	30	*5*	33	*18*
2009-10	56	63.5	*7*	27	*4*	29	*15*
Total/Avg.	**1,388**	**63.7**	***10***	**761**	***7***	**628**	***24***

*The ”Total/Avg” row is a weighted average. The “% retiring” is the proportion of all faculty in the age group who retired in that year.

Appendix 2
Distribution of UW-Madison Faculty by Age at Retirement

	1990-94		1994-98		1998-02		2002-06		2006-2010		Total	
Age At Retirement	#	%	#	%	#	%	#	%	#	%	#	%
55-59	29	*11*	71	*21*	81	*29*	49	*19*	56	*23*	286	*21*
60-64	111	*42*	126	*37*	82	*30*	89	*35*	66	*27*	474	*34*
65	44	*16*	38	*11*	29	*11*	29	*11*	25	*10*	165	*12*
66-69	50	*19*	73	*21*	62	*22*	58	*23*	59	*24*	302	*22*
70 and Over	33	*12*	37	*11*	22	*8*	28	*11*	41	*17*	161	*12*
Total	**267**	***100***	**345**	***100***	**276**	***100***	**253**	***100***	**247**	***100***	**1,388**	***100***

Appendix 3
Distribution of UW-Madison Faculty by Age
October 1976, 1990, 2000, and 2010

	1976		1990		2000		2010		Change 00-10	
	#	%	#	%	#	%	#	%	#	% pt.
Under 30	133	*6*	45	*2*	24	*1*	16	*1*	-8	*0*
30-34	343	*15*	237	*10*	137	*6*	123	*6*	-14	*0*
35-39	375	*16*	379	*15*	216	*10*	256	*12*	+40	*+2*
40-44	395	*17*	366	*15*	359	*17*	301	*14*	-58	*-3*
45-49	371	*16*	386	*16*	396	*18*	297	*14*	-99	*-4*
50-54	265	*11*	352	*14*	355	*16*	353	*16*	-2	*0*
55-59	223	*10*	340	*14*	335	*15*	361	*17*	+26	*+2*
60-64	159	*7*	245	*10*	230	*11*	270	*12*	+50	*+1*
65-69	73	*3*	79	*3*	94	*4*	132	*6*	+38	*+2*
70 and Over	5	*0*	19	*1*	27	*1*	64	*3*	+37	*+2*
Total	**2,342**	**---**	**2,448**	**---**	**2,173**	**---**	**2,173**	**---**	**0**	**---**
Mean Age	45.0	---	47.3	---	49.1	---	50.4	---	+1.3	---

Appendix 4
Older Faculty by Department (as of October 1, 2010) and Predicted Retirements
Sorted by Percent 55 and Older

UDDS	Department Name	Total	Age 55 and Over		Age 65 and Over		Predicted to Retire (2010-20)
		#	#	%	#	%	#
A4852	Linguistics	5	5	*100*	2	*40*	4
A5450	School of Nursing	21	16	*76*	3	*14*	15
A0730	Biochemistry	32	23	*72*	5	*16*	19
A1995	Engineering Professional Development	6	4	*67*	1	*17*	3
A5347	Medical Microbiology	12	8	*67*	1	*8*	6
A4860	School of Music	47	30	*64*	5	*11*	24
A4806	Afro-American Studies	8	5	*63*	0	*0*	3
A5360	Ophthalmology and Visual Science	17	10	*59*	5	*29*	10
A8731	Pathobiological Sciences	19	11	*58*	4	*21*	9
A4806	African Languages and Literature	7	4	*57*	3	*43*	3
A5309	Anesthesiology	7	4	*57*	0	*0*	3
A5343	Dermatology	7	4	*57*	0	*0*	3
A0742	Genetics	16	9	*56*	2	*13*	7
A5363	Pathology	18	10	*56*	3	*17*	13
A0754	Soil Science	18	10	*56*	2	*11*	7
A0728	Bacteriology	20	11	*55*	1	*5*	8
A4835	German	15	8	*53*	3	*20*	10
A5359	Oncology	19	10	*53*	3	*16*	7
A5381	Physiology	19	10	*53*	2	*11*	10
A4807	Anthropology	20	10	*50*	1	*5*	10
A4818	Communicative Disorders	14	7	*50*	0	*0*	7
A5333	Human Oncology	10	5	*50*	2	*20*	5
A4884	Languages and Cultures of Asia	10	5	*50*	2	*20*	7
A5361	Orthopedics and Rehabilitation	10	5	*50*	1	*10*	3
A5367	Pediatrics	23	11	*48*	5	*22*	11
A8741	Comparative Biosciences	17	8	*47*	1	*6*	5
A1723	Education Leadership and Policy Analysis	17	8	*47*	3	*18*	6
A4809	Art History	15	7	*47*	4	*27*	7
A0736	Entomology	13	6	*46*	1	*8*	5

UDDS	Department Name	Total	Age 55 and Over		Age 65 and Over		Predicted to Retire (2010-20)
		#	#	%	#	%	#
A4892	Theatre and Drama	13	6	*46*	1	*8*	4
A5351	Neurology	11	5	*45*	1	*9*	4
A0746	Nutritional Sciences	11	5	*45*	0	*0*	5
A1720	Curriculum and Instruction	29	13	*45*	6	*21*	8
A0727	Animal Science	18	8	*44*	2	*11*	6
A4838	History	45	20	*44*	5	*11*	17
A0724	Life Sciences Communication	9	4	*44*	1	*11*	5
A4880	Slavic Languages	9	4	*44*	0	*0*	2
A4813	Botany	16	7	*44*	2	*13*	8
A4849	Journalism and Mass Communication	16	7	*44*	0	*0*	7
A4865	Philosophy	16	7	*44*	3	*19*	6
A1980	Engineering Physics	21	9	*43*	2	*10*	8
A0766	Landscape Architecture	7	3	*43*	0	*0*	1
A5389	Psychiatry	14	6	*43*	1	*7*	4
A0752	Community and Environmental Sociology	12	5	*42*	0	*0*	4
A4824	English	48	20	*42*	5	*10*	14
A5328	Obstetrics and Gynecology	12	5	*42*	1	*8*	5
A0764	Forest and Wildlife Ecology	22	9	*41*	2	*9*	9
A4826	French and Italian	20	8	*40*	1	*5*	8
A0743	Horticulture	20	8	*40*	1	*5*	6
A5348	Medical Physics	20	8	*40*	5	*25*	6
A5372	Pharmacology	10	4	*40*	3	*30*	4
A8751	Surgical Sciences	5	2	*40*	0	*0*	1
A4894	Urban and Regional Planning	5	2	*40*	0	*0*	4
A5397	Surgery	21	8	*38*	2	*10*	1
A4883	Sociology	37	14	*38*	3	*8*	14
A4039	Nelson Institute for Environmental Studies	8	3	*38*	3	*38*	3
A5306	Anatomy	16	6	*38*	3	*19*	7
A0748	Plant Pathology	16	6	*38*	0	*0*	7
A4874	Psychology	32	12	*38*	1	*3*	12
A4885	Spanish and Portuguese	24	9	*38*	1	*4*	9
	University Average	**2,173**	**827**	***38***	**196**	***9***	**789**

UDDS	Department Name	Total	Age 55 and Over		Age 65 and Over		Predicted to Retire (2010-20)
		#	#	%	#	%	#
A1710	Art	27	10	*37*	2	*7*	10
A0726	Agronomy	19	7	*37*	1	*5*	8
A1730	Educational Psychology	19	7	*37*	0	*0*	8
A2710	School of Human Ecology	38	14	*37*	1	*3*	15
A1220	School of Business	77	28	*36*	8	*10*	30
A8721	Medical Sciences	11	4	*36*	0	*0*	5
A0720	Agricultural and Applied Economics	20	7	*35*	1	*5*	6
A4815	Chemistry	40	14	*35*	8	*20*	13
A4867	Physics	49	17	*35*	9	*18*	18
A1915	Civil and Environmental Engineering	26	9	*35*	3	*12*	9
A4510	Law School	38	13	*34*	4	*11*	11
A5342	Medicine	62	21	*34*	3	*5*	4
A1760	Kinesiology	15	5	*33*	0	*0*	4
A5385	Population Health Sciences	21	7	*33*	2	*10*	6
A1778	Rehabilitation Psychology and Special Ed.	12	4	*33*	1	*8*	5
A4890	Statistics	15	5	*33*	2	*13*	6
A1962	Mechanical Engineering	34	11	*32*	1	*3*	11
A5393	Radiology	16	5	*31*	1	*6*	6
A4844	Lafollette School of Public Affairs	13	4	*31*	1	*8*	3
A0740	Food Science	10	3	*30*	0	*0*	5
A1925	Electrical and Computer Engineering	38	11	*29*	2	*5*	12
A1762	Dance	7	2	*29*	0	*0*	3
A4832	Geoscience	21	6	*29*	0	*0*	3
A4839	History of Science	7	2	*29*	0	*0*	1
A1975	Materials Science and Engineering	14	4	*29*	3	*21*	4
A5610	Pharmacy	32	9	*28*	2	*6*	5
A0734	Dairy Science	11	3	*27*	0	*0*	4
A1727	Educational Policy Studies	11	3	*27*	0	*0*	3
A0722	Biological Systems Engineering	16	4	*25*	0	*0*	8
A5320	Family Medicine	8	2	*25*	1	*13*	5
A4829	Geography	16	4	*25*	1	*6*	7
A4851	Library and Information Studies	8	2	*25*	1	*13*	2

UDDS	Department Name	Total	Age 55 and Over		Age 65 and Over		Predicted to Retire (2010-20)
		#	#	%	#	%	#
A1950	Industrial Engineering	17	4	*24*	0	*0*	3
A4821	East Asian Language and Literature	13	3	*23*	2	*15*	4
A4872	Political Science	31	7	*23*	1	*3*	6
A5331	History of Medicine	9	2	*22*	1	*11*	1
A4854	Mathematics	46	10	*22*	4	*9*	10
A4857	Atmospheric and Oceanic Sciences	14	3	*21*	0	*0*	5
A4882	Social Work	15	3	*20*	0	*0*	6
A4814	Communication Arts	21	4	*19*	0	*0*	5
A4897	Zoology	21	4	*19*	2	*10*	3
A4820	Computer Sciences	37	7	*19*	0	*0*	7
A4822	Economics	32	6	*19*	1	*3*	7
A5377	Biomolecular Chemistry	11	2	*18*	1	*9*	5
A4811	Astronomy	12	2	*17*	0	*0*	3
A4878	Scandinavian Studies	6	1	*17*	0	*0*	1
A1912	Chemical Engineering	19	3	*16*	0	*0*	5
A5312	Biostatistics and Medical Informatics	14	2	*14*	1	*7*	3
A4817	Classics	7	1	*14*	0	*0*	1
A1716	Counseling Psychology	8	1	*13*	0	*0*	2
A4896	Gender and Women's Studies	8	1	*13*	0	*0*	1
A5325	Genetics	8	1	*13*	0	*0*	1
A5357	Neurological Surgery	9	1	*11*	0	*0*	2
A1942	Biomedical Engineering	11	1	*9*	1	*9*	2
A5398	Urology	5	0	*0*	0	*0*	0

*Only department with 5 or more total faculty are shown.

Methodology

1. The source of the data used in this analysis is IADS, UW-Madison's current Human Resources (appointment) data system. Specifically, the data view UW_ALL_APTS_SEN was used.

2. Retirement is defined as faculty age 55 and older whose faculty appointments ended during the period of October 1st to September 30th of the period of time described. Age 55 is used in this (and previous) reports because it is usually the youngest age that a faculty member can retire under the State of Wisconsin retirement system. For the purposes of this report, the term "retirement" is used to mean "left employment at UW-Madison" rather than "drew on retirement benefits" or "stopped working forever". Faculty in the latter two categories are not discernable in UW-Madison data systems.

   Margaret Harrigan's statistical analyses of predictors of faculty retirements show that age is the single best predictor of likelihood of retirement. Consideration of years of service and age at initial hire increase the predictive ability of the model to a small degree. However, this increase in predictive ability is offset by the complexity of using multiple factors in a projection model. For this reason, we use age alone.

3. Age is calculated as of October 1st.

4. Faculty members are counted in their "major appointment" department and in the school/college where that department is housed. The "major appointment" department is responsible for coordinating the faculty member's payroll, appointment and other administrative issues. This is often, but not always, the same department as the faculty member's "tenure home". The "major appointment" department is used because faculty have only one major appointment department whereas faculty can have more than one tenure home and appointments in multiple departments.

5. Retirements are predicted in the following manner:
   a) The historic retirement rate is calculated for each faculty age group 55 and older. For this report, we used the retirement rate over the most recent 10 year period.
   b) Next, faculty members with appointments as of October 1, 2010 are assigned a random number.
   c) Then the historic retirement rate is applied to current faculty in that age group to determine the predicted retirements of faculty in that age group for that year. Faculty members are randomly selected to "retire" based on the lowest random number assignments in that age group.
   d) For example, the retirement rate over the past 10 years for 65 year old faculty members is 21.6%. In October 2010, there were 40 faculty members who were age 65. The retirement rate, applied to the current number of faculty (0.216*40) results in the prediction that 9 (8.64 rounded up) of the current faculty age who are 65 years old will retire in 2011. The specific 9 faculty members who are predicted to retire are the 9 with the lowest randomly assigned numbers in that age group. The same methodology is then applied to faculty in all the other age groups that year.
   e) This same methodology is then applied to faculty in subsequent years, taking into account the fact that they will be a year older and that a different retirement rate will apply to them in subsequent years. For example, of the 40 faculty members who were 65 years old in 2010 and didn't retire in 2010, 31 of them are still actively employed. Because these 31 will be 66 years old in 2010 and the retirement rate of 66 year olds is 19.5%, 6 more are predicted to retire in 2012.

6. These retirement predictions are based on these assumptions:
   a) Retirements are random. In other words, we assume that 60 year old Chemists retire at the same rate as 60 year old Political Scientists and 57 year old women retire at the same rate as 57 year old men.
   b) New faculty hires during the 10 year projected period will either not enter into the retirement age group (i.e. will be under age 45 at the time they are hired) or not leave within 10 years of being hired.
   c) Past trends have not been unduly influenced by inducements to change normal patterns of retirement behavior. Also, predictions are made assuming that such incentives will not be available in future years.
   d) Faculty will retire at rates similar to other faculty of the same age during the previous ten years. Economic conditions that may have influenced retirement behavior during the immediately preceding ten years are already factored into the retirement rate. Predictions of future retirements assume a similar influence of the economy on the decision of faculty to retire.