

**Analysis of  
Student Demographic Trends**

**Prepared by**

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for the  
Office of Institutional Planning and Analysis  
Oakland Community College**

**March, 1994**

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## **Trends in Student Age**

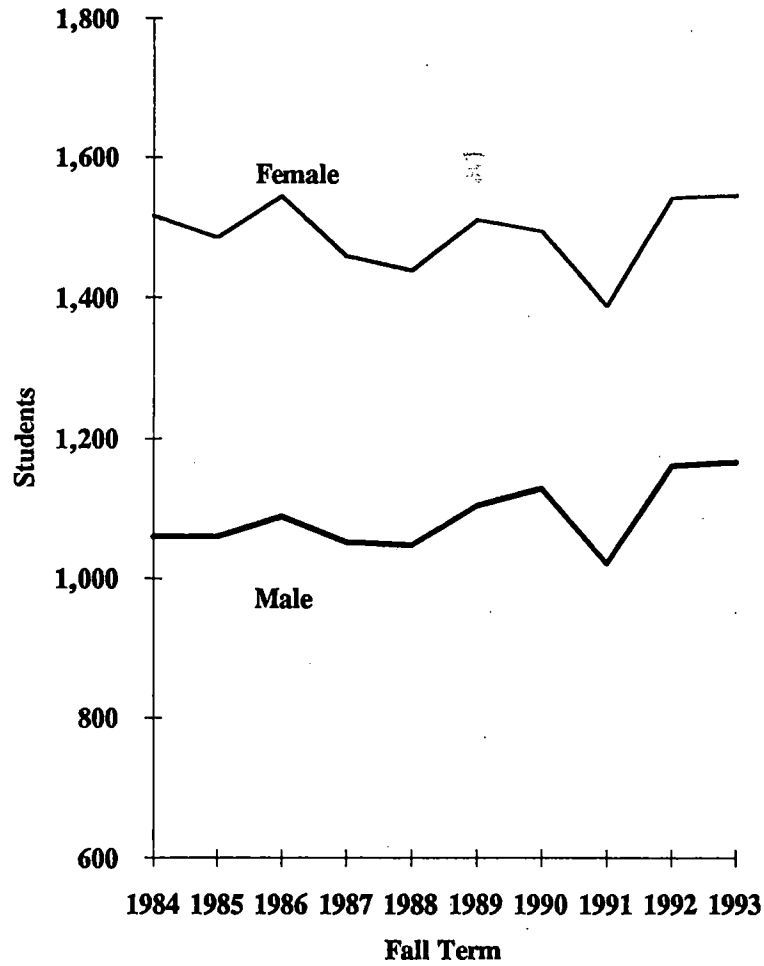
### **Royal Oak/Southfield**

Royal Oak/Southfield

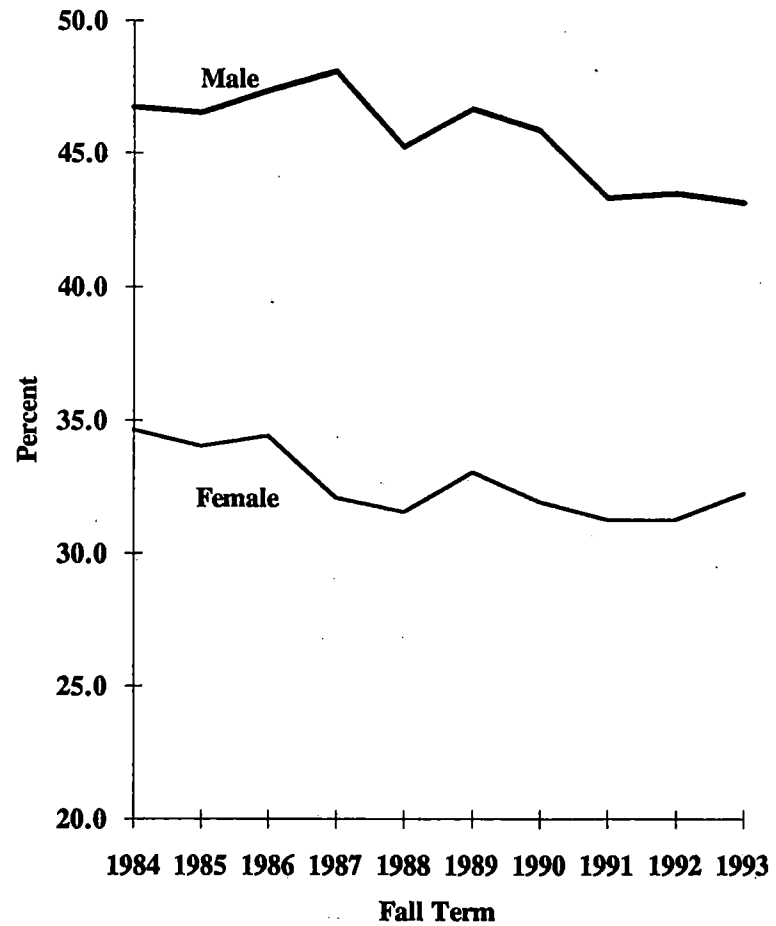
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	Percent Change	
											5-Year	10-Year
<b>Female</b>												
Under 17	58	44	55	52	45	34	34	7	22	10	-70.6	-82.8
18-22	1,515	1,484	1,545	1,458	1,438	1,511	1,494	1,389	1,543	1,546	2.3	2.0
23-27	837	857	869	921	895	903	910	908	978	966	7.0	15.4
28-32	683	683	710	702	713	679	741	688	747	672	-1.0	-1.6
33-37	513	497	493	544	564	525	563	534	615	591	12.6	15.2
38-42	314	342	350	371	396	387	387	358	435	419	8.3	33.4
43-47	198	205	215	218	229	267	271	277	293	293	9.7	48.0
48-Over	222	211	215	249	263	252	275	272	279	276	9.5	24.3
Unknown	34	36	36	31	17	12	2	10	21	18		
	4,374	4,359	4,488	4,546	4,560	4,570	4,677	4,443	4,933	4,791		
<b>Male</b>												
Under 17	46	49	38	38	42	26	18	4	11	7	-73.1	-84.8
18-22	1,060	1,060	1,089	1,052	1,048	1,105	1,130	1,022	1,162	1,167	5.6	10.1
23-27	501	490	481	461	518	537	570	530	599	603	12.3	20.4
28-32	303	329	311	281	293	313	317	335	364	352	12.5	16.2
33-37	165	151	174	189	198	188	208	212	249	242	28.7	46.7
38-42	84	79	70	53	98	91	105	109	118	140	53.8	66.7
43-47	34	46	55	47	40	48	56	52	70	92	91.7	170.6
48-Over	42	40	55	48	69	48	57	82	87	89	85.4	111.9
Unknown	33	34	26	17	10	11	3	12	11	11		
	2,268	2,278	2,299	2,186	2,316	2,367	2,464	2,358	2,671	2,703		
<b>Total</b>												
Under 17	104	93	93	90	87	60	52	11	33	17	-71.7	-83.7
18-22	2,575	2,544	2,634	2,510	2,486	2,616	2,624	2,411	2,705	2,713	3.7	5.4
23-27	1,338	1,347	1,350	1,382	1,413	1,440	1,480	1,438	1,577	1,569	9.0	17.3
28-32	986	1,012	1,021	983	1,006	992	1,058	1,023	1,111	1,024	3.2	3.9
33-37	678	648	667	733	762	713	771	746	864	833	16.8	22.9
38-42	398	421	420	424	494	478	492	467	553	559	16.9	40.5
43-47	232	251	270	265	269	315	327	329	363	385	22.2	65.9
48-Over	264	251	270	297	332	300	332	354	366	365	21.7	38.3
Unknown	67	70	62	48	34	23	10	637	45	30		
<b>Grand Total</b>	6,642	6,637	6,787	6,732	6,883	6,937	7,146	7,416	7,617	7,495	8.0	12.8

Royal Oak/Southfield 18-22 Year Old Students

Trends in 18-22 Year Old Enrollment

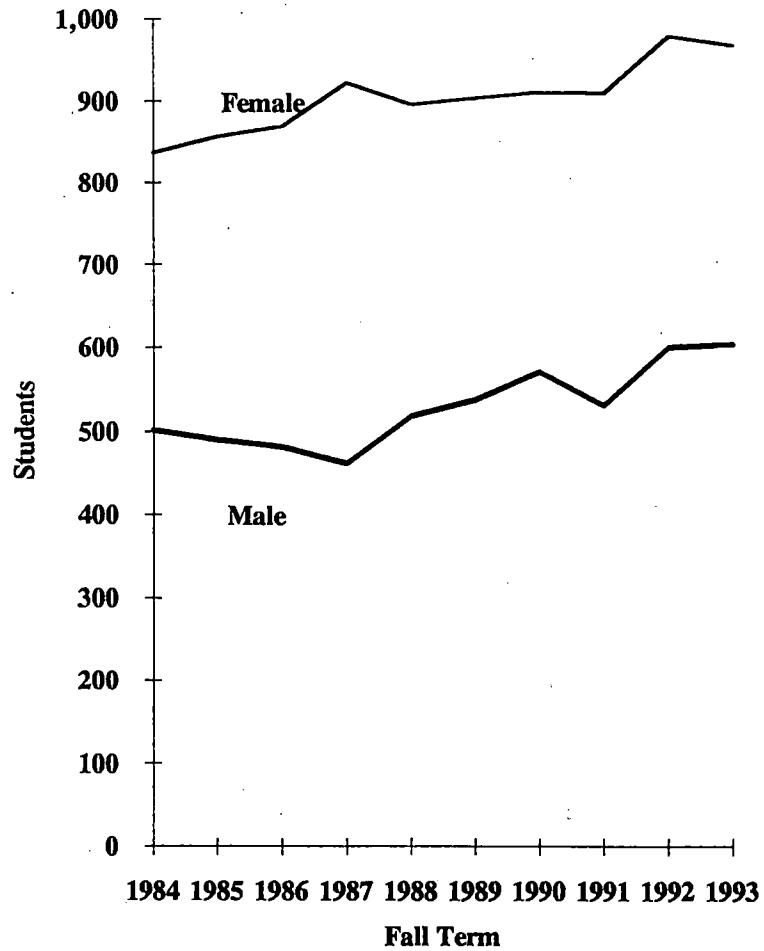


Percent 18-22 Year Olds in Total Enrollment

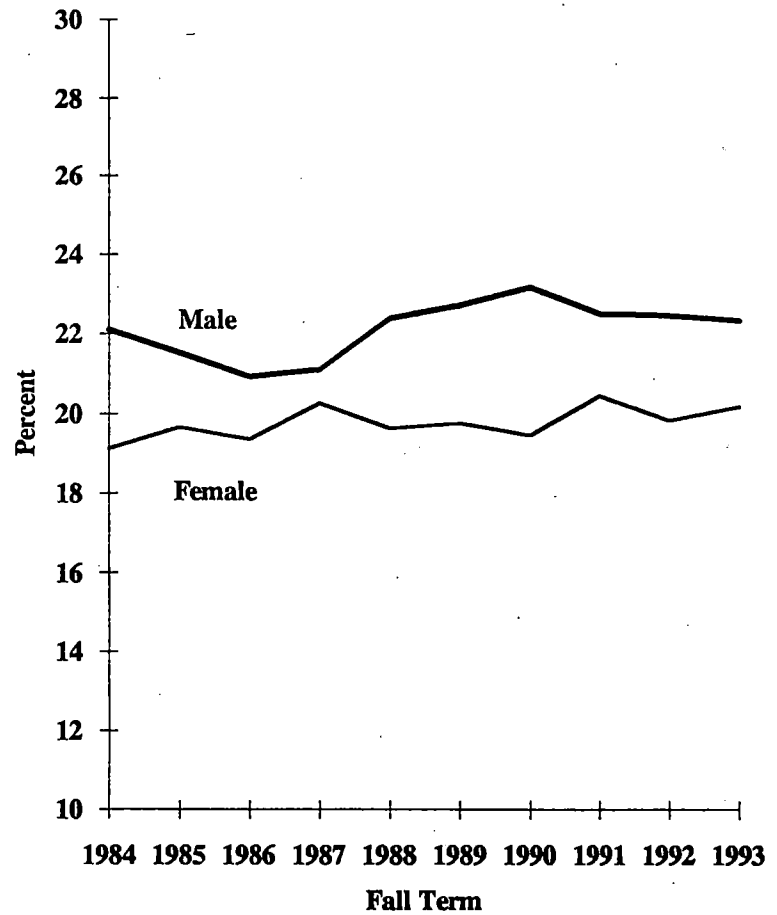


Royal Oak/Southfield 23-27 Year Old Students

Trends in 23-27 Year Old Enrollment

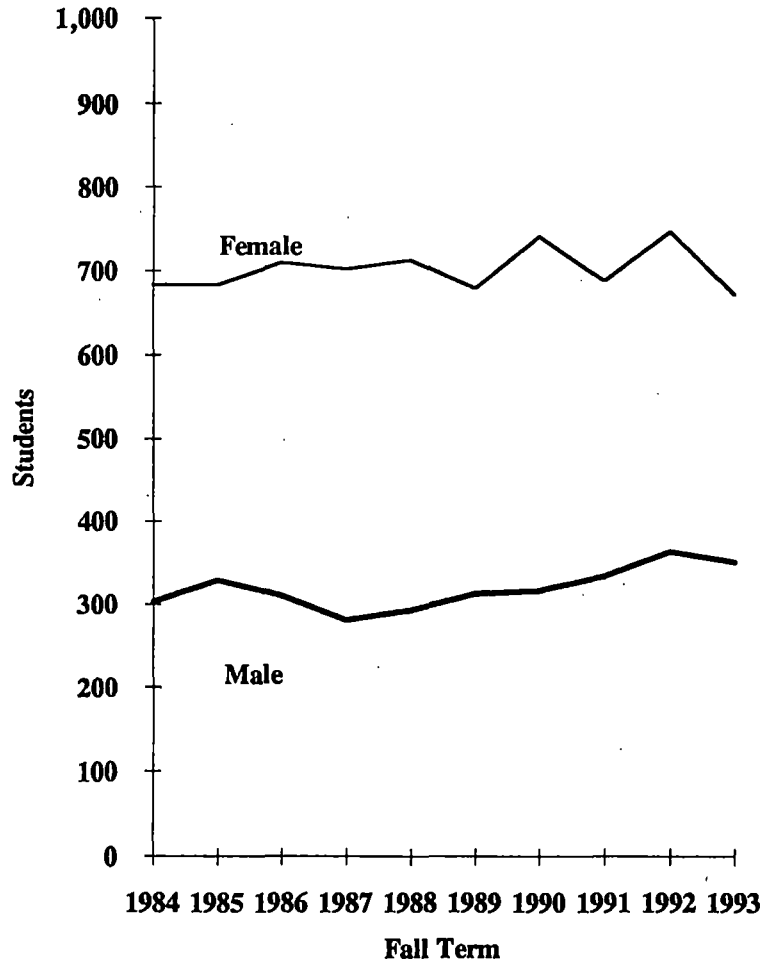


Percent 23-27 Year Olds in Total Enrollment

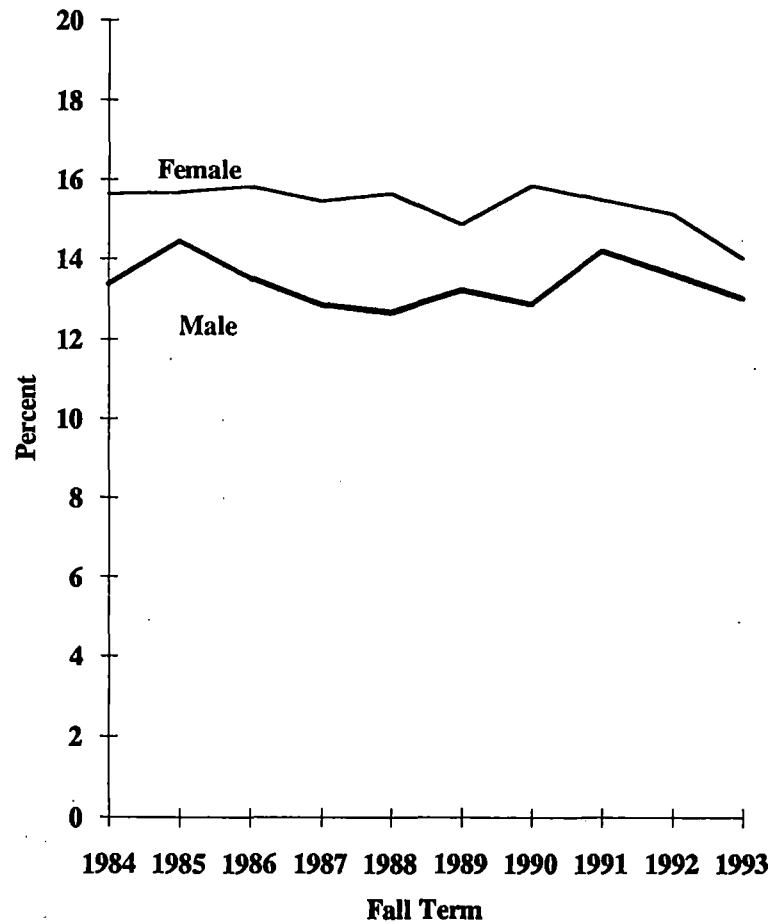


### Royal Oak/Southfield 28-32 Year Old Students

#### Trends in 28-32 Year Old Enrollment

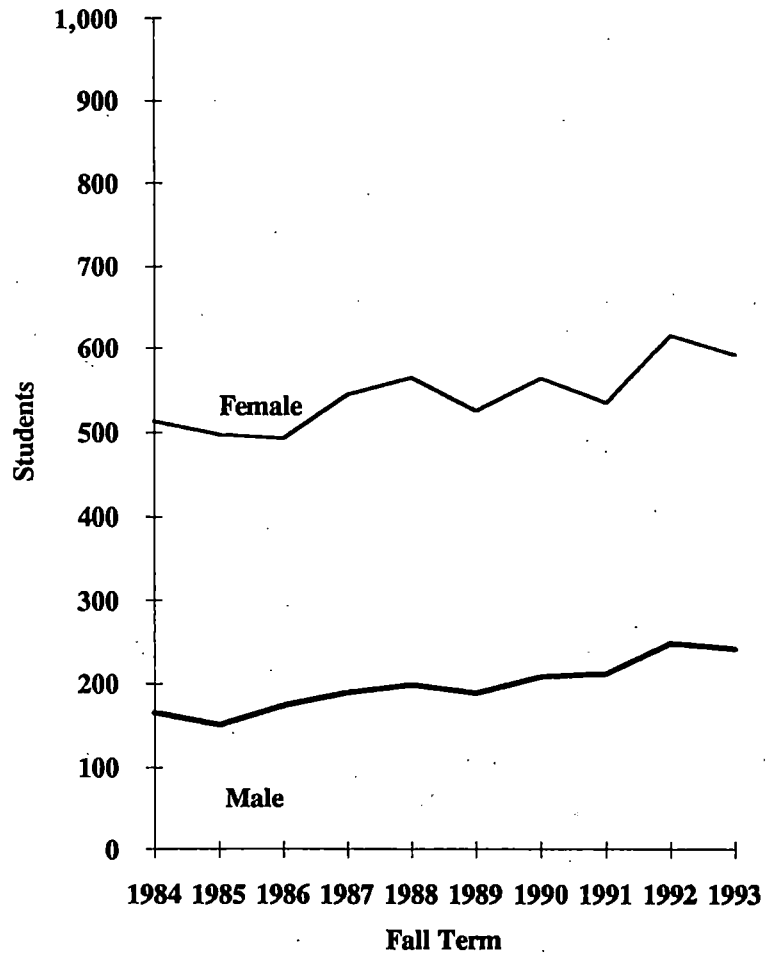


#### Percent 28-32 Year Olds in Total Enrollment

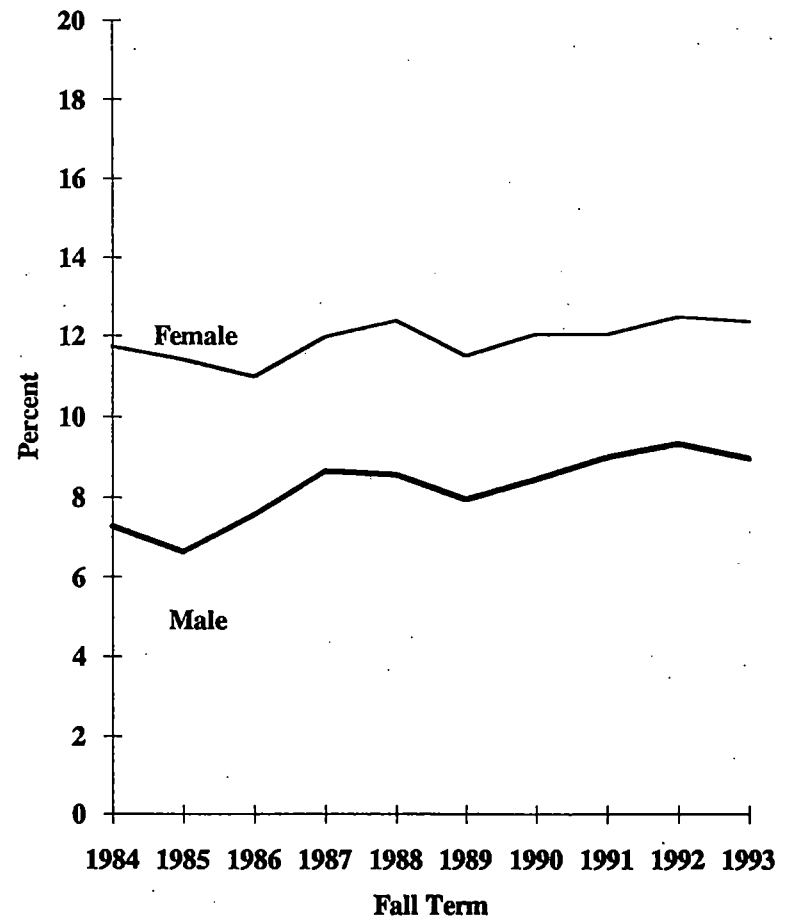


## Royal Oak/Southfield 33-37 Year Old Students

### Trends in 33-37 Year Old Enrollment



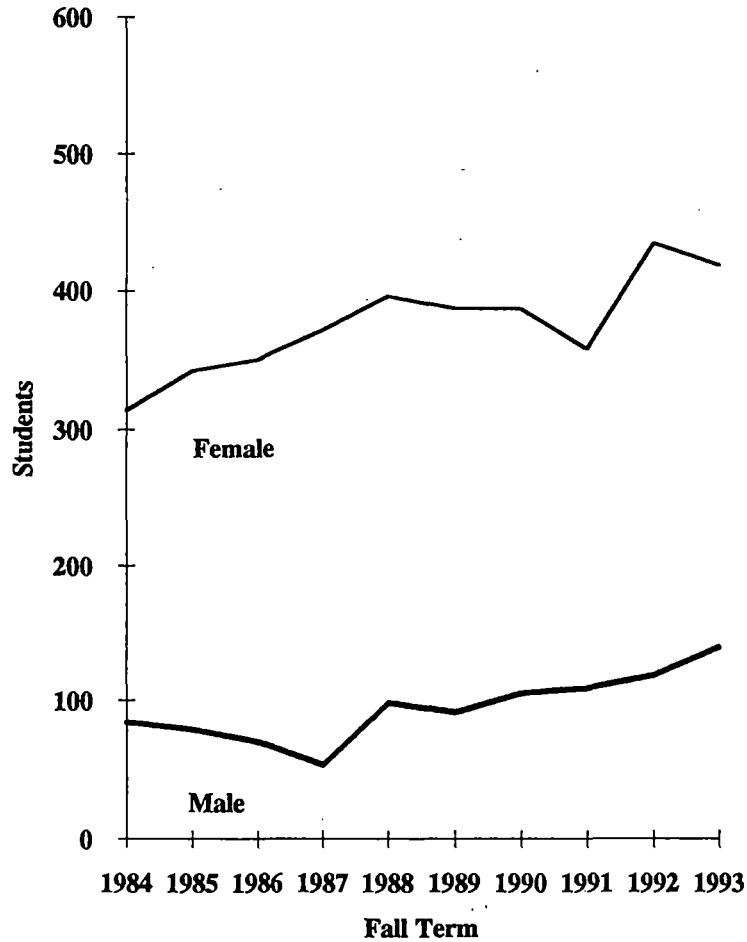
### Percent 33-37 Year Olds in Total Enrollment





Royal Oak/Southfield 38-42 Year Old Students

Trends in 38-42 Year Old Enrollment

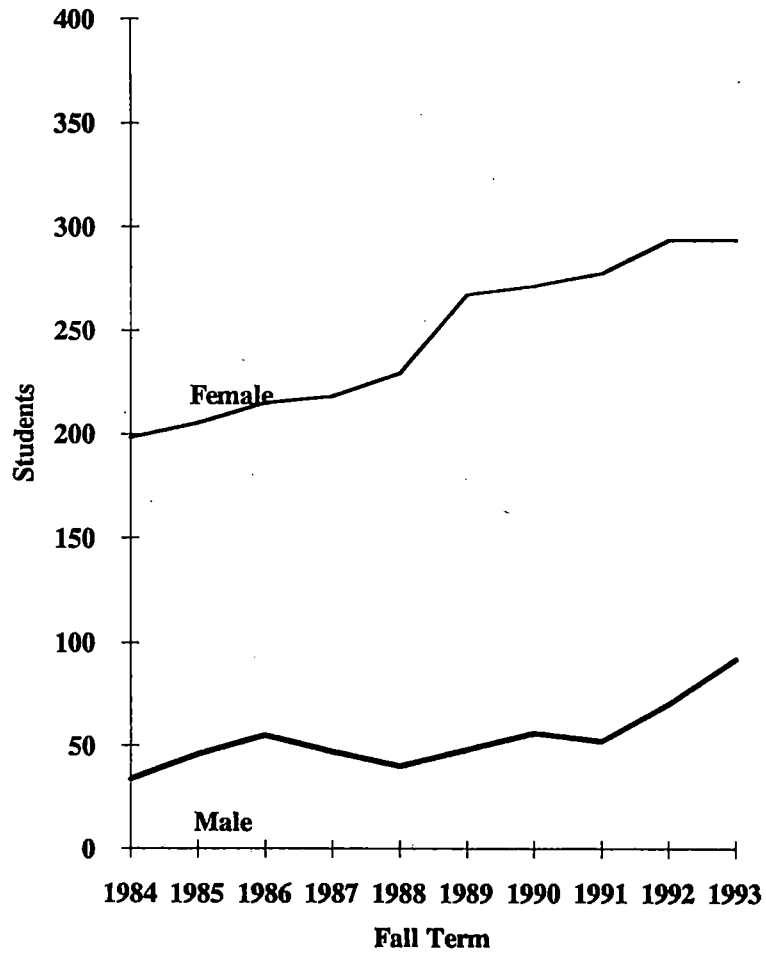


Percent 38-42 Year Olds in Total Enrollment

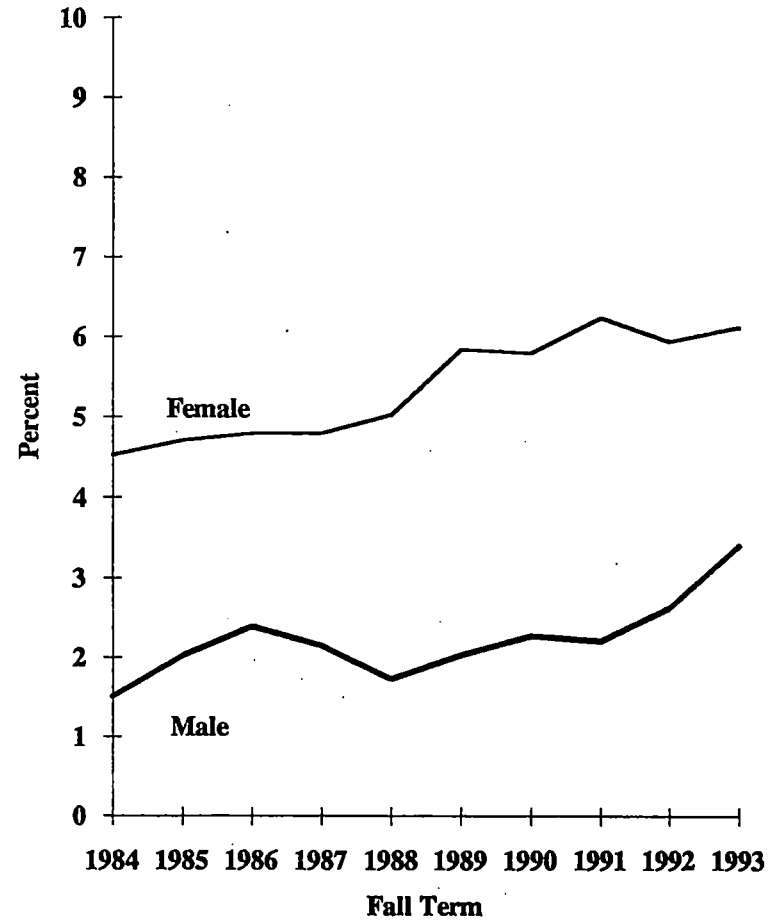


## Royal Oak/Southfield 43-47 Year Old Students

### Trends in 43-47 Year Old Enrollment

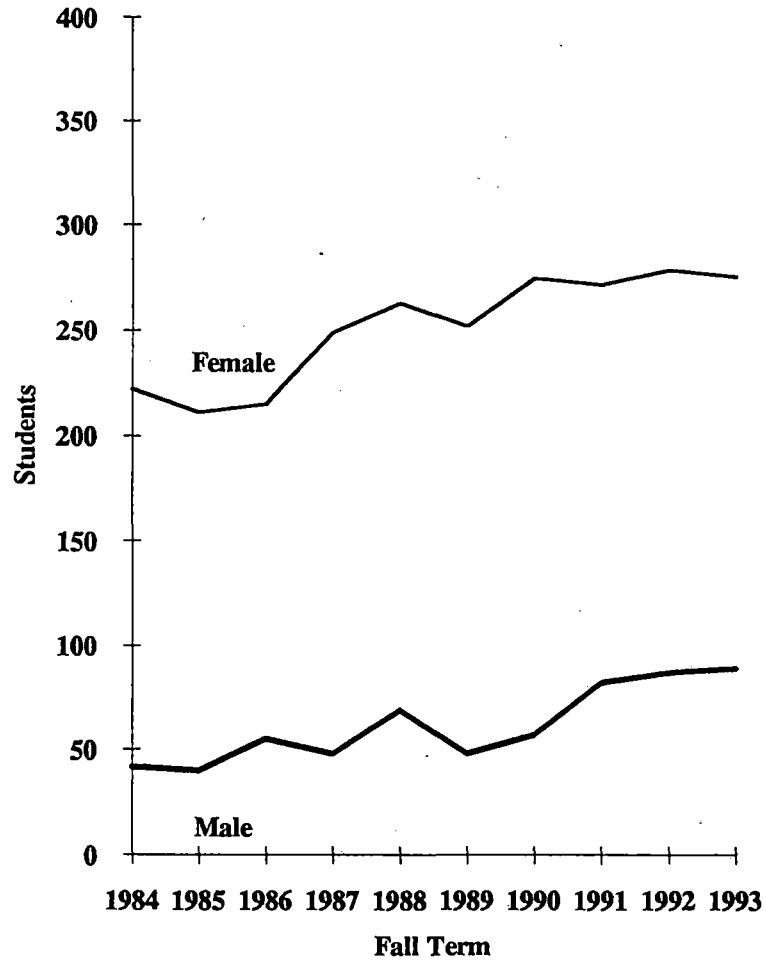


### Percent 43-47 Year Olds in Total Enrollment

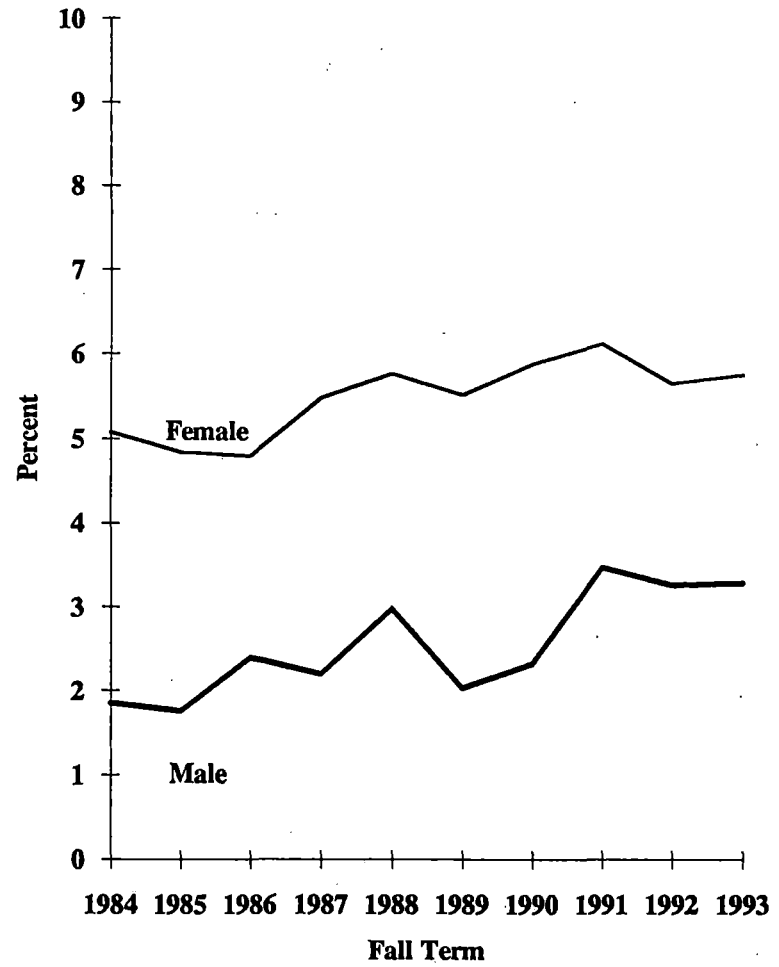


### Royal Oak/Southfield 48 Years & Over Students

**Trends in 48 & Over Enrollment**



**Percent 48 & Over in Total Enrollment**



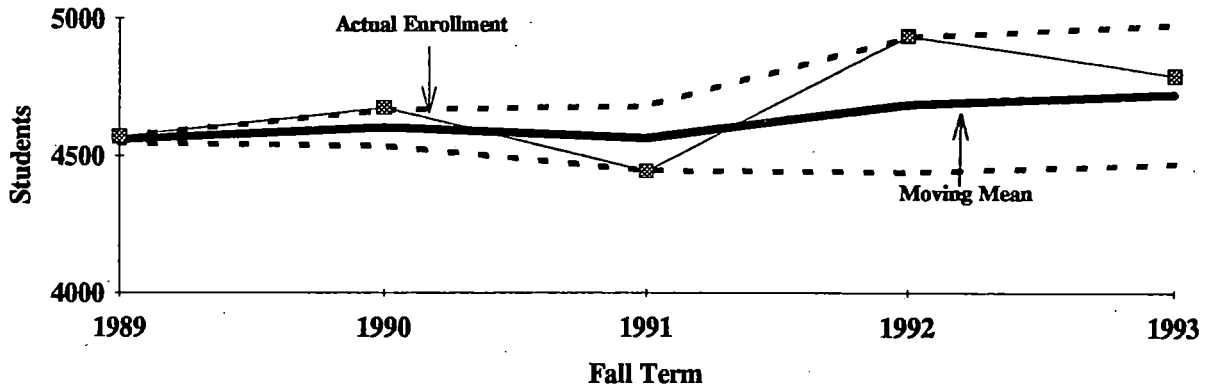


**Trends in Enrollment by Gender  
 Royal Oak/Southfield**

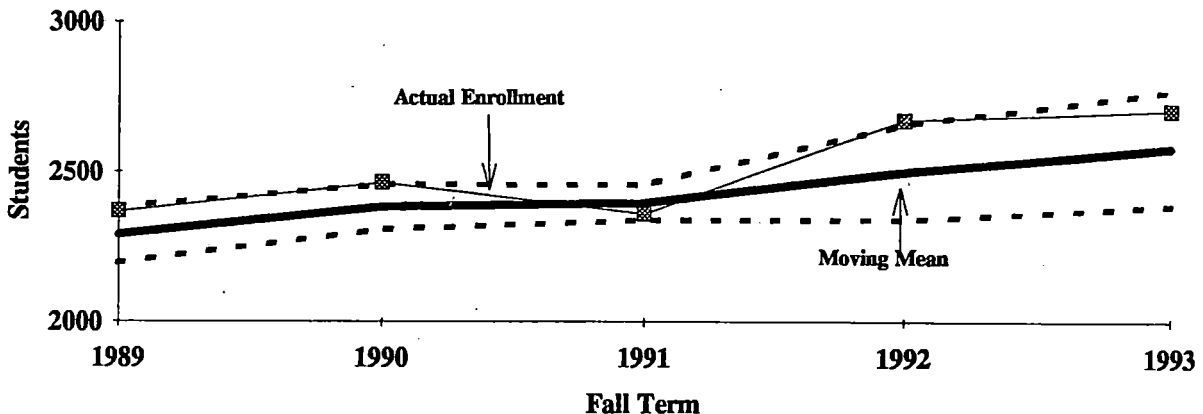
Gender	1989				1990			
	Actual	M. Mean	Std. Dev	Expected Range	Actual	M. Mean	Std. Dev	Expected Range
Female	4,570	4,559	12.1	4,571 4,547	4,677	4,602	64.9	4,667 4,537
Male	2,367	2,290	93.3	2,383 2,197	2,464	2,382	75.2	2,457 2,307
Gender	1991				1992			
	Actual	M. Mean	Std. Dev	Expected Range	Actual	M. Mean	Std. Dev	Expected Range
Female	4,443	4,563	117.1	4,680 4,446	4,933	4,684	245.1	4,929 4,439
Male	2,358	2,396	58.8	2,455 2,337	2,671	2,498	159.2	2,657 2,339
Gender	1993							
	Actual	M. Mean	Std. Dev	Expected Range				
Female	4,791	4,722	252.1	4,974 4,470				
Male	2,703	2,577	190.6	2,768 2,386				

Female and male enrollment have been consistently above the moving mean (see report for explanation of 1991). Years where enrollment exceeds the standard deviation indicates a better than expected rise in the population. The dotted lines in each graph represent the standard deviation from the moving mean.

**Trend in Female Students**



**Trend in Male Students**



## Summary

As can be seen from this analysis, Oakland Community College has had a steadily increasing enrollment trend over the past five years. When looking at college-wide data, female enrollment is above the predicted mean for Fall 1992. However when analyzing the Fall 1993 enrollment data the values are within the predicted range. Since the Fall 1992 data is beyond the range and Fall 1993 within the range, it must be concluded that the drop in enrollment is due to factors in Fall 1992 not 1993. To fully understand what contributed to the enrollment increase of Fall 1992, one must examine all influences (internal and external) to determine its above normal value. However that analysis is beyond the scope of this report.

When looking at the Fall 1991 data it is important to consider that a large number of students did not report their gender for that year (1,691 missing cases). A crude calculation, based on the standard distribution of Oakland Community College students representing 58 percent female and 42 percent male, will add 981 female students and 710 male students to the college-wide totals. This would raise both male and female enrollments into the predicted range. (This calculation would also raise the moving mean and standard deviation, however the effect would not be drastic.) Therefore, although the data suggest an abnormally low enrollment in Fall 1991, after factoring in the missing cases, the Fall 1991 enrollment is normal.

Other important considerations from this data can be seen from the campus data. To get a rough estimate of trends occurring at each campus, look at the slope of the moving mean. Auburn Hills has been experiencing a decrease in its male population, while the number of female students is on the rise. Highland Lakes has shown steady increases in both genders, however females are outpacing males. Orchard Ridge has been steadily losing students of both genders over the past four years. At Royal Oak/Southfield both genders are on the rise, but the number of males seems to be increasing more than females.

This Section has attempted to illustrate trends in enrollment by gender over the past five years. When examining this trend it is important to note the difference between natural variability in the data and aberrations caused by some other factors. While year-to-year data may fluctuate, the college should look for major deviations from the trend. An in depth analysis at the time may determine why that deviation occurred.

## Section Two: Trends in Student Age

### Introduction

This Section highlights enrollment trends with regards to student age. The analysis looks at fluctuations in student age groups. Since 1989 Oakland Community College has experienced an increase in the mean age of its students. This increase may be attributed to one of three factors: 1) a decrease in younger students; 2) an increase in older students; or 3) a combination of both conditions. Furthermore, since Oakland Community College has multiple campuses, it is possible that a dramatic increase or decrease in student age at one campus could influence the college-wide totals. If the college can pinpoint why the mean age of its students is rising, it can better respond to the needs of the students. A representation of the college-wide mean age of enrolled students is depicted below.

Figure 2  
Enrolled Students' Mean Age

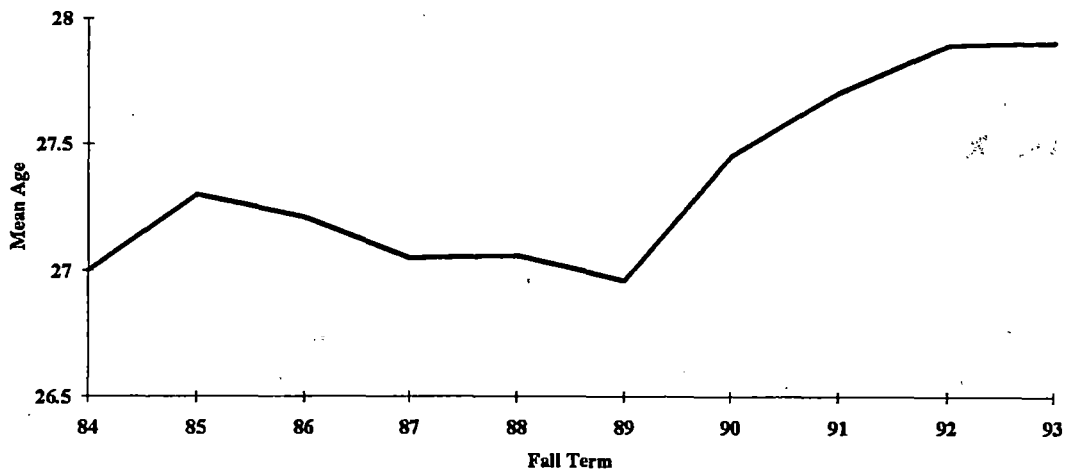


Figure 2 illustrates a ten year trend in the college-wide mean age of students. In the past five years the mean age of enrolled students has increased by nearly one year (from 27.0 in 1989 to 27.9 in 1993).

## Methodology

The following analysis is divided into sections with data presented by age categories grouped by campus and college-wide numbers. Students are classified into one of nine age populations: under 17, 18-22, 23-27, 28-32, 33-37, 38-42, 43-47, 48 & over, and unknown. Data are gathered from one-tenth day enrollment figures for each of the Fall terms. For the purposes of this report, students not indicating their gender were added to the total unknown category. This information was then analyzed to determine which of the three effects (decrease in younger students, increase in older students, or a combination of both) was actually taking place at Oakland Community College. The data are separated by campus to determine if an increase or decrease of mean age at one campus is affecting the college-wide totals.

Following the Analysis section, data for each population are displayed in a ten-year trend table format, separated into male, female and total students. College-wide totals are presented first followed by each campus in alphabetical order. A five-year and ten-year percent change is given to illustrate changes in student enrollment by age groups. Graphical representations follow each table, with age categories graphed by the number of students enrolled as well as percent of total enrollment. The categories "under 17" and "unknown" are not graphically depicted because of their small and fluctuating numbers. To determine the effects of one age group on the overall mean age, it is necessary to view all the graphs independently and then compare.

## Analysis

To fully analyze the data, we first looked at changes in college-wide student age and then compared these findings with each campus.

### *College-Wide*

In the past ten years Oakland Community College has experienced a 2.2 percent decline in 18-22 year old students. The percentage of male students within this age group dropped by 4.2 percent while 18-22 year old female enrollment remained relatively steady with only a 0.3 percent loss of students. While these numbers may seem small, the percentage decrease was remarkably higher in the past five years. Since 1989, the college has lost 8.9 percent of its 18-22 year old students, which includes a 7.2 percent drop in female and a 10.8 percent drop in male enrollment. This decline represents a large number of students, as 18-22 year olds have traditionally been the largest group of students. The overall decrease in 18-22 year olds in the past five years has been 1,067 students.

In comparison students within the 38-43, 44-48, and 48 & over age categories have shown a 20 percent or greater increase in the past five years. This large percentage increase can mostly be attributed to the remarkable rise in male enrollments within those



age groups (40.7 percent, 54.7 percent and 45.4 percent, respectively). However, these large percentages reflect only small gains in students as these age groups have been traditionally the smallest groups of students. The five-year increase in student enrollment within the 38-42, 43-47, and 48 & over age groups was 402, 338, and 236 students, respectively.

### *Auburn Hills*

In the past ten years there has been an increase of 3.4 percent in the number of 18-22 year olds, however this represents a 15.4 percent increase in female students, but a 5.6 percent decline in males. Although the number of 18-22 year old female students showed a five-year decrease of 3.1 percent; over the same period, the number of male students decreased by 13.3 percent. While Auburn Hills has traditionally enrolled more males than female students, that gap is closing (see Section 1).

While 18-22 year old enrollment has been dropping (8.9 percent in the last five years), Auburn Hills has seen a 25 percent or greater increase in all students within the 38-42, 43-47, and 48 & over age groups. Most of the increase within these age groups reflects large increases in male students. As with college-wide totals large percentage increases within these categories represent small gains in actual students.

### *Highland Lakes*

Over the past five and ten year periods, there have been increases in the number of students from all age categories. Overall, the Highland Lakes campus has grown 21.8 percent in the past five years to a total enrollment of 5,516 students. The least growth occurred in the 18-22 year old category, and the highest increases within the 38-42 year old category. While the student population of 18-22 year olds increased by 471 students, students in the 38-42, 43-47, and 48 & over categories posted gains of 143, 71, and 68, respectively.

### *Orchard Ridge*

Orchard Ridge has suffered a loss of 16.8 percent of its total enrollment in the past ten years, 13.2 percent in the last five years. The largest decrease is in the 18-22 year old category with five-year losses of 28.3 percent of females and 24.7 percent of male students. All other age groups experienced more moderate declines except for the 43-47, and 48 & over groups which had increases of 11.9 and 13.2 percent over the same period.

In the last five years there has been a loss of 978 18-22 year old students. While all other groups showed small losses, the only gains were 61 students in the 43-47 and 48 & over groups. Overall Orchard Ridge has lost over 1,000 students in the past five years.

### *Royal Oak/Southfield*

In the past five years nearly every age category has shown an increase in students. Only 28-32 year olds females showed any decrease, 1.0 percent. The smallest increases are seen in the younger age groups, while larger increases occurred in the 38-42, 43-47, and 48 & over groups. The number of males in the older age groups have shown dramatic increases of over 50 percent in the past five years. The overall five-year increase of students is 557. Of those students only 97 were 18-22 years old, while 216 students were in the oldest age groups.

### **Summary**

College-wide there has been a decrease in 18-22 year old students and an increase in older students. In fact the actual numbers of students gained in the three older categories approximately equals the number of students lost in the 18-22 year old group. These two factors account for the steady increase in the mean age over the past five years. More importantly it depicts a long term trend of an older student base. These data are supported by nation-wide statistics which predict student's mean age will slowly increase. Although the traditional 18-22 year old students will most likely remain the college's largest population, it is important to recognize the increase in older students. The college should determine the needs of these older students, as they typically have different goals than the traditional student.

Auburn Hills and Orchard Ridge are the two campuses which are losing 18-22 year old students, while gaining older students. While Auburn Hills has maintained a steady enrollment since 1989, there has been an increase in female students and a decline in the male population. Further analysis of this enrollment pattern may be warranted to determine the needs of the increasing numbers of female students. Orchard Ridge has lost over 1,000 students in the past five years, most of them from the younger age group. Continued losses may require Orchard Ridge to examine its program offerings and services to either retain its numbers or increase enrollments from other areas. It may also be necessary to examine other factors, such as community demographics or high school recruitment, to determine where Orchard Ridge should concentrate its efforts.

Highland Lakes has shown a 20 percent increase in total enrollment, and gains in every age group. Continued increases, coupled with Orchard Ridges' 13 percent decrease, will soon make Highland Lakes the third largest campus. It may want to focus on ways to handle its increased enrollment and needs of new students. Royal Oak/Southfield also posted enrollment gains in nearly all age categories. As with Highland Lakes, the needs of these new students should be assessed to determine their goals and needs. Although the actual numbers are low, large percentage increases of older males suggest that Royal Oak/Southfield may also wish to determine the needs of this group.

## **Trends in Student Age**

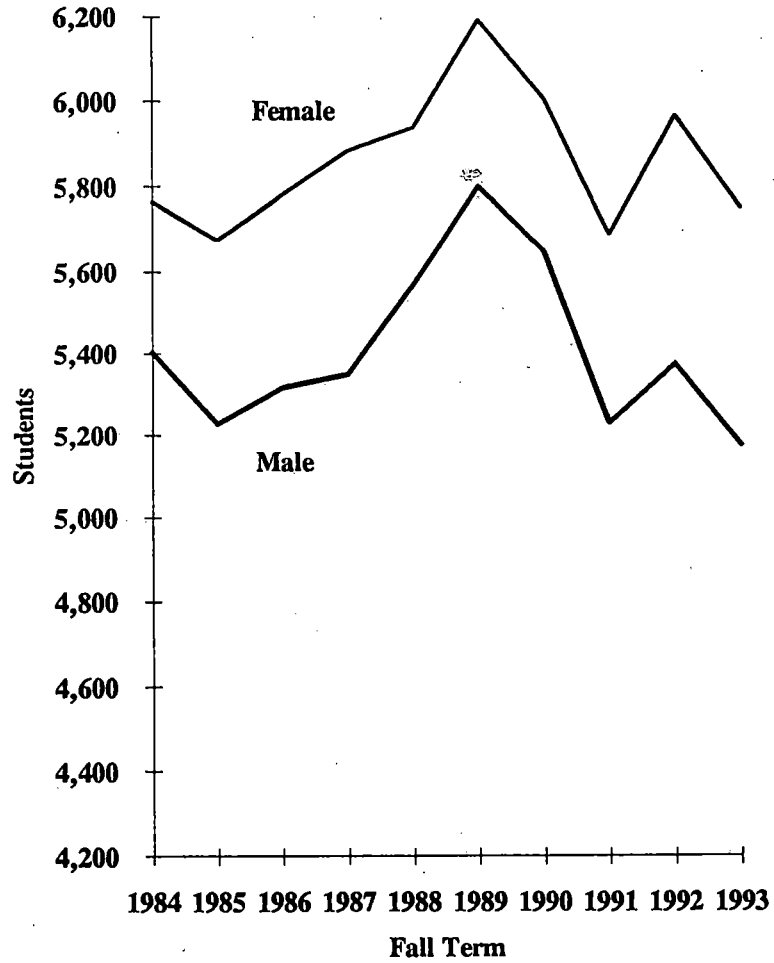
### **College-Wide**

## College-Wide

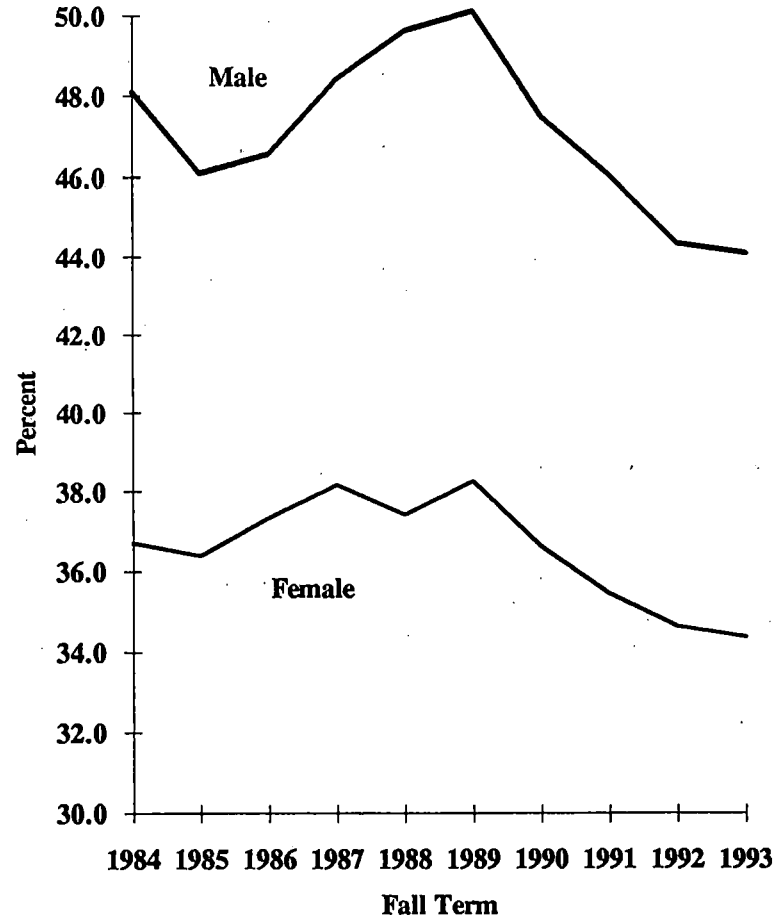
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	Percent Change	
											5-Year	10-Year
<b>Female</b>												
Under 17	93	88	102	95	67	80	75	32	58	56	-30.0	-39.8
18-22	5,766	5,675	5,780	5,884	5,938	6,193	6,005	5,688	5,966	5,750	-7.2	-0.3
23-27	3,003	2,907	2,826	2,785	2,983	3,026	3,114	3,076	3,298	3,342	10.4	11.3
28-32	2,239	2,221	2,133	2,060	2,149	2,172	2,238	2,254	2,390	2,222	2.3	-0.8
33-37	1,747	1,763	1,741	1,741	1,789	1,736	1,827	1,850	2,027	1,924	10.8	10.1
38-42	1,314	1,299	1,248	1,250	1,303	1,318	1,423	1,402	1,540	1,520	15.3	15.7
43-47	761	820	818	789	821	907	919	888	1,010	1,008	11.1	32.5
48-Over	662	687	687	714	742	713	777	809	857	841	18.0	27.0
Unknown	119	137	141	97	78	41	17	43	70	54		
<b>Subtotal</b>	<b>15,704</b>	<b>15,597</b>	<b>15,476</b>	<b>15,415</b>	<b>15,870</b>	<b>16,186</b>	<b>16,395</b>	<b>16,042</b>	<b>17,216</b>	<b>16,717</b>		
<b>Male</b>												
Under 17	82	91	70	74	72	57	46	32	40	43	-24.6	-47.6
18-22	5,402	5,228	5,316	5,349	5,567	5,801	5,648	5,230	5,375	5,177	-10.8	-4.2
23-27	2,496	2,393	2,445	2,375	2,347	2,450	2,489	2,414	2,670	2,673	9.1	7.1
28-32	1,479	1,553	1,522	1,380	1,357	1,400	1,442	1,410	1,488	1,411	0.8	-4.6
33-37	811	879	857	859	839	852	1,060	1,041	1,098	1,006	18.1	24.0
38-42	403	494	441	429	459	455	546	603	668	640	40.7	58.8
43-47	216	297	290	225	242	254	345	288	367	393	54.7	81.9
48-Over	234	278	306	254	253	238	292	291	343	346	45.4	47.9
Unknown	107	125	168	100	78	61	22	42	68	47		
<b>Subtotal</b>	<b>11,230</b>	<b>11,338</b>	<b>11,415</b>	<b>11,045</b>	<b>11,214</b>	<b>11,568</b>	<b>11,890</b>	<b>11,351</b>	<b>12,117</b>	<b>11,736</b>		
<b>Total</b>												
Under 17	175	179	172	169	139	137	121	64	98	99	-27.7	-43.4
18-22	11,168	10,903	11,096	11,233	11,505	11,994	11,653	10,918	11,341	10,927	-8.9	-2.2
23-27	5,499	5,300	5,271	5,160	5,330	5,476	5,603	5,490	5,968	6,015	9.8	9.4
28-32	3,718	3,774	3,655	3,440	3,506	3,572	3,680	3,664	3,878	3,633	1.7	-2.3
33-37	2,558	2,642	2,598	2,600	2,628	2,588	2,887	2,891	3,125	2,930	13.2	14.5
38-42	1,717	1,793	1,689	1,679	1,762	1,773	1,969	2,005	2,208	2,160	21.8	25.8
43-47	977	1,117	1,108	1,014	1,063	1,161	1,264	1,176	1,377	1,401	20.7	43.4
48-Over	896	965	993	968	995	951	1,069	1,100	1,200	1,187	24.8	32.5
Unknown	226	262	310	197	187	104	52	1,776	168	105		
<b>Grand Total</b>	<b>26,934</b>	<b>26,935</b>	<b>26,892</b>	<b>26,460</b>	<b>27,115</b>	<b>27,756</b>	<b>28,298</b>	<b>29,084</b>	<b>29,363</b>	<b>28,457</b>	<b>2.5</b>	<b>5.7</b>

### College-Wide 18-22 Year Old Students

Trends in 18-22 Year Old Enrollment

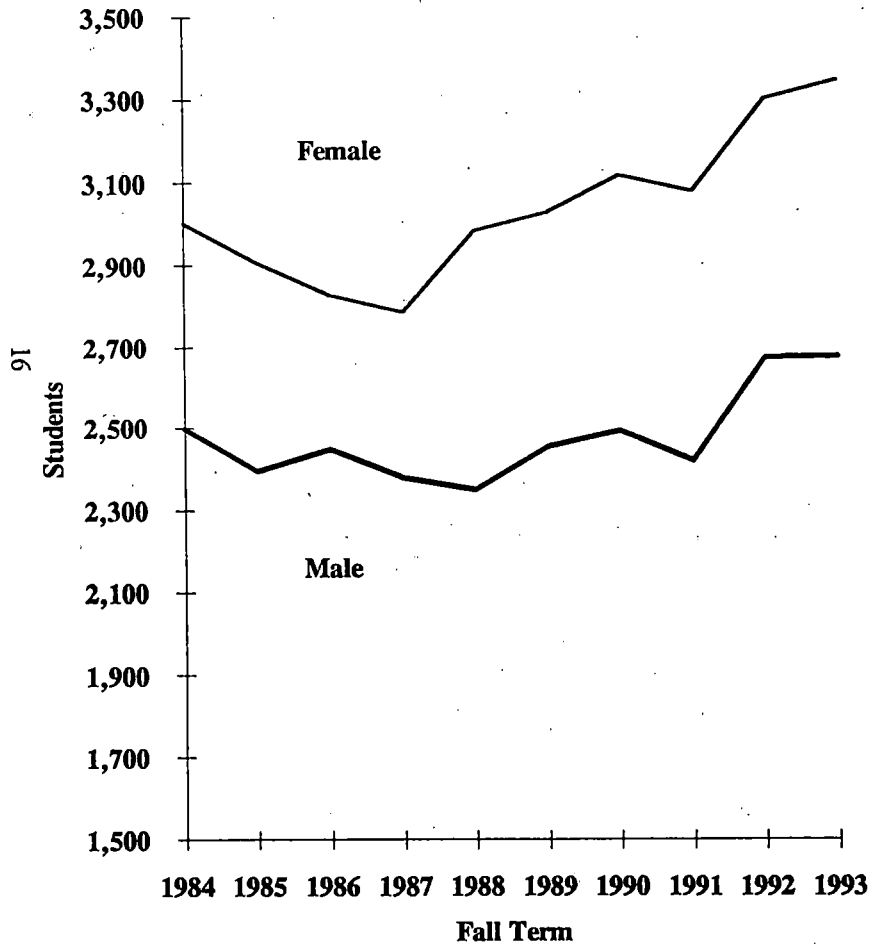


Percent 18-22 Year Olds in Total Enrollment

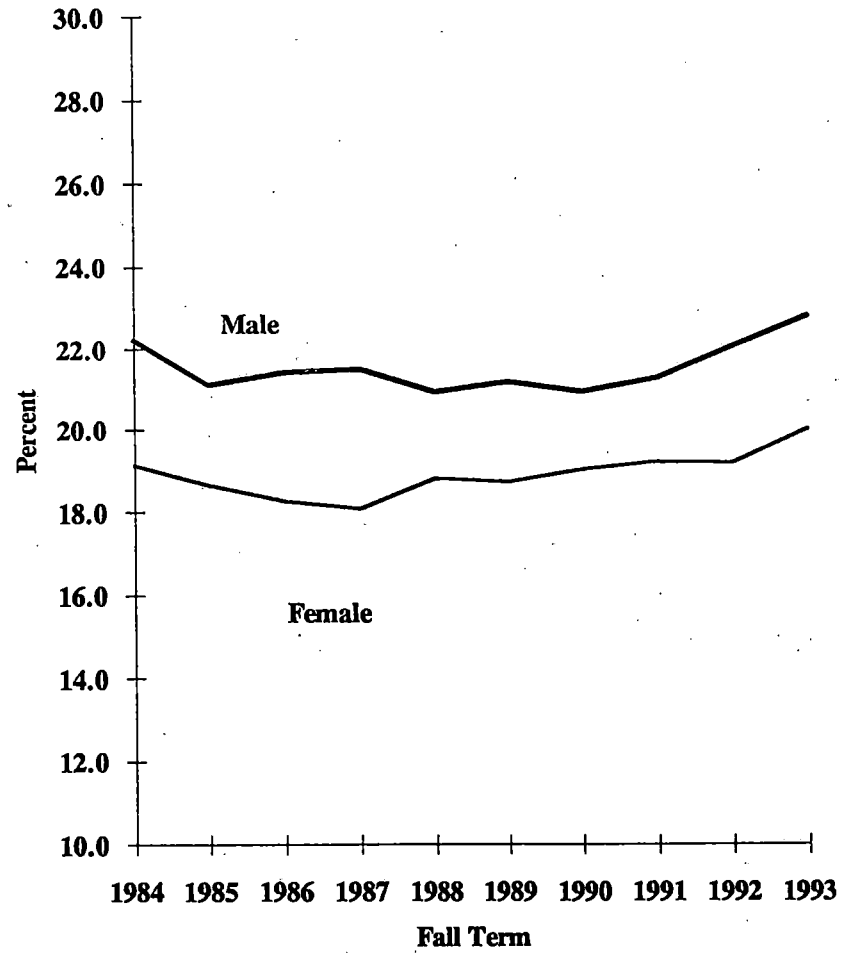


## College-Wide 23-27 Year Old Students

### Trends in 23-27 Year Old Enrollment

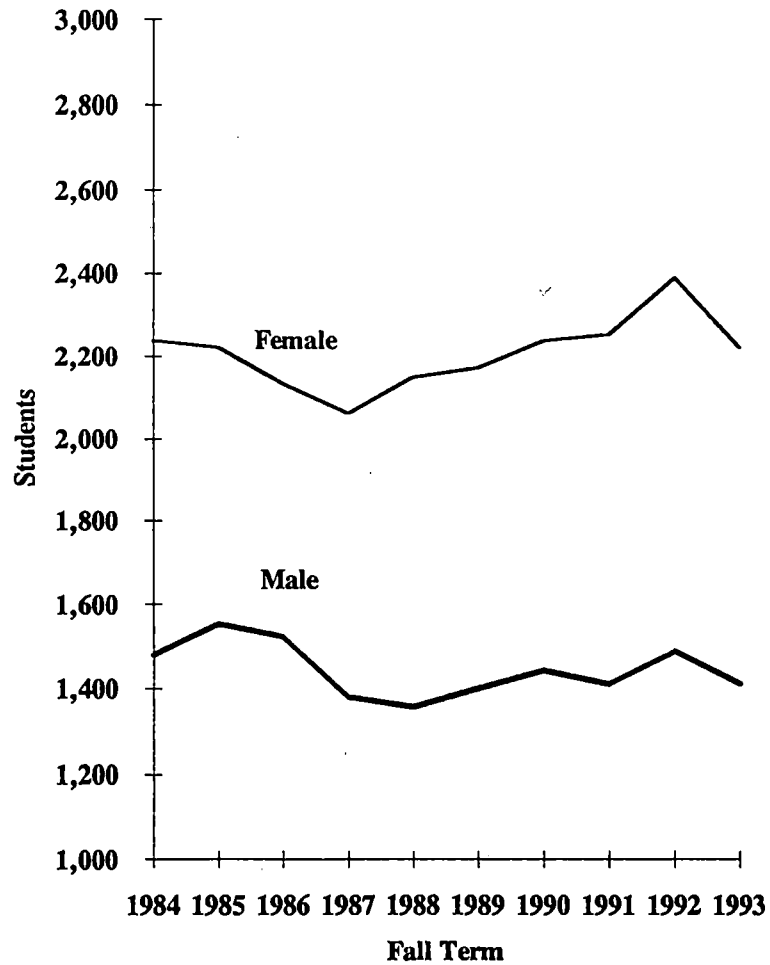


### Percent 23-27 Year Olds in Total Enrollment

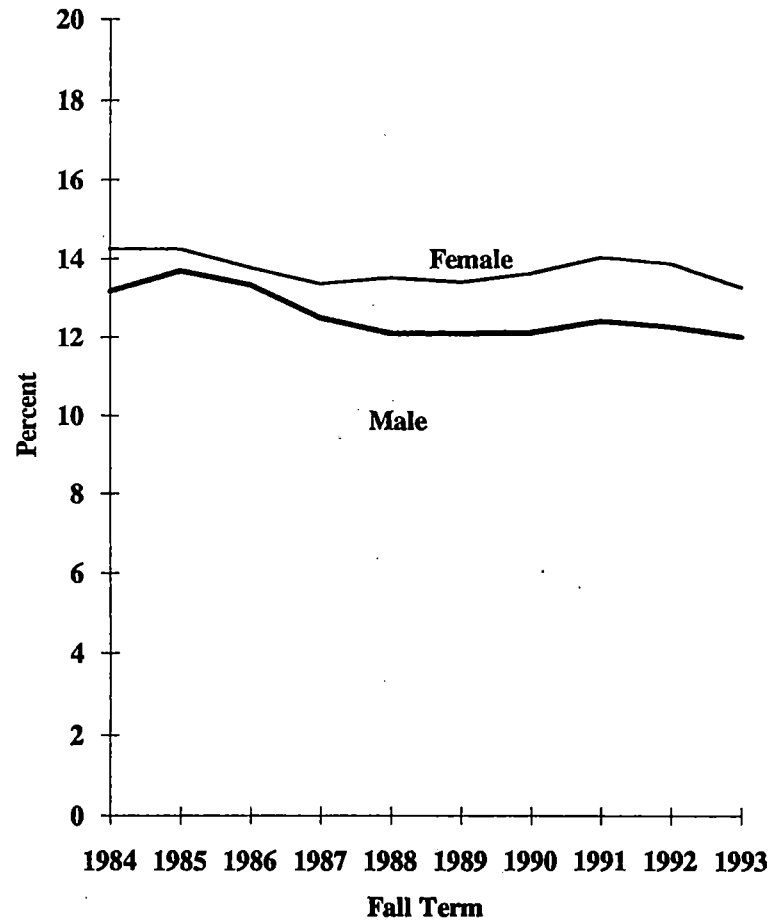


### Oakland Community College College-Wide Trends in 28-32 Year Old Enrollment (Fall 1984 Through Fall 1993)

#### Trends in 28-32 Year Old Enrollment

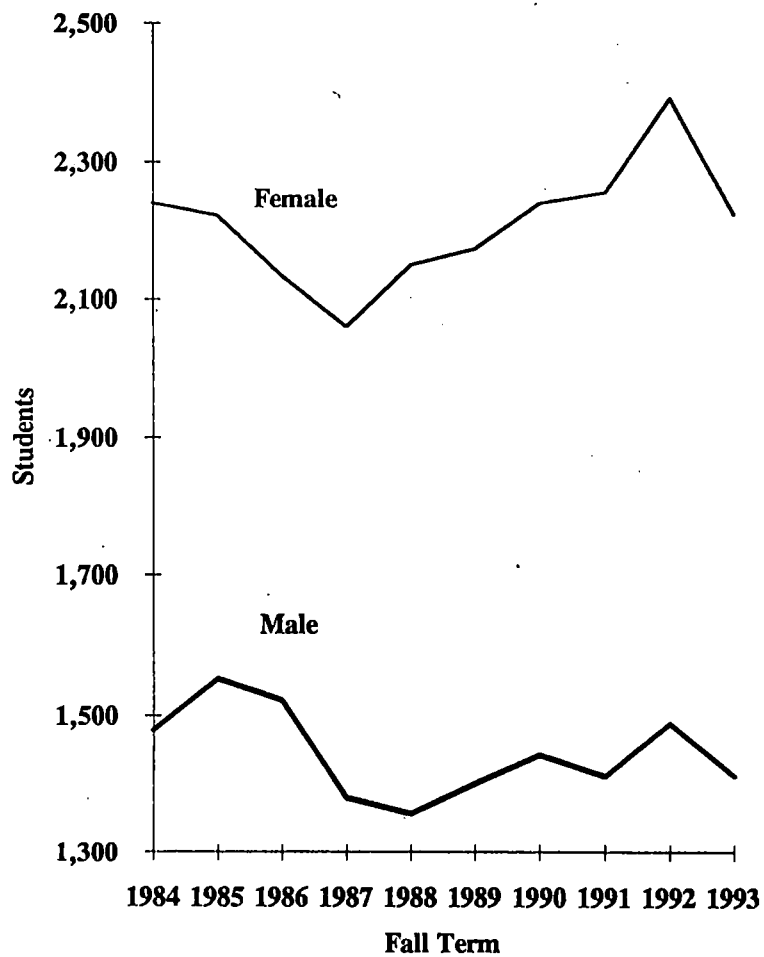


#### Percent 28-32 Year Olds in Total Enrollment

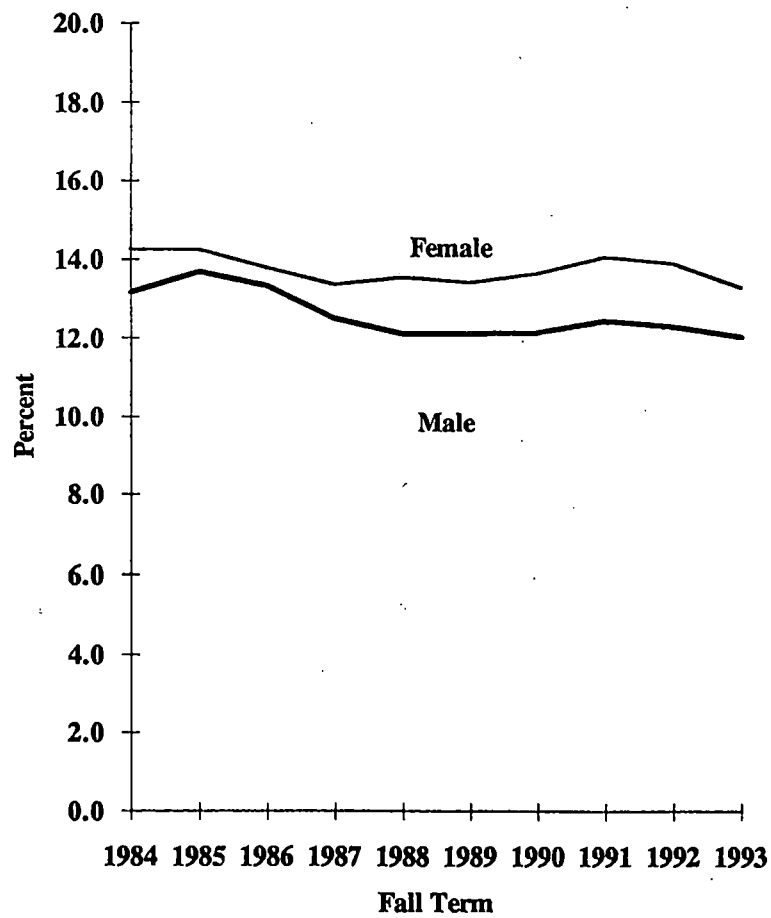


### College-Wide 33-37 Year Old Students

**Trends in 33-37 Year Old Enrollment**



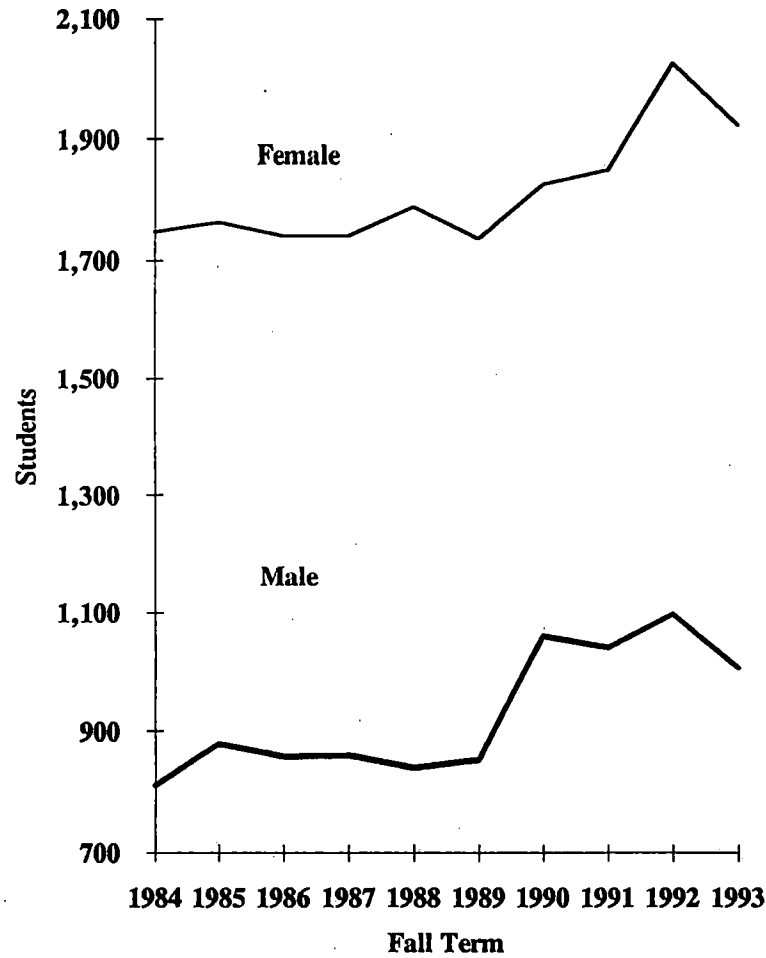
**Percent 33-37 Year Olds in Total Enrollment**



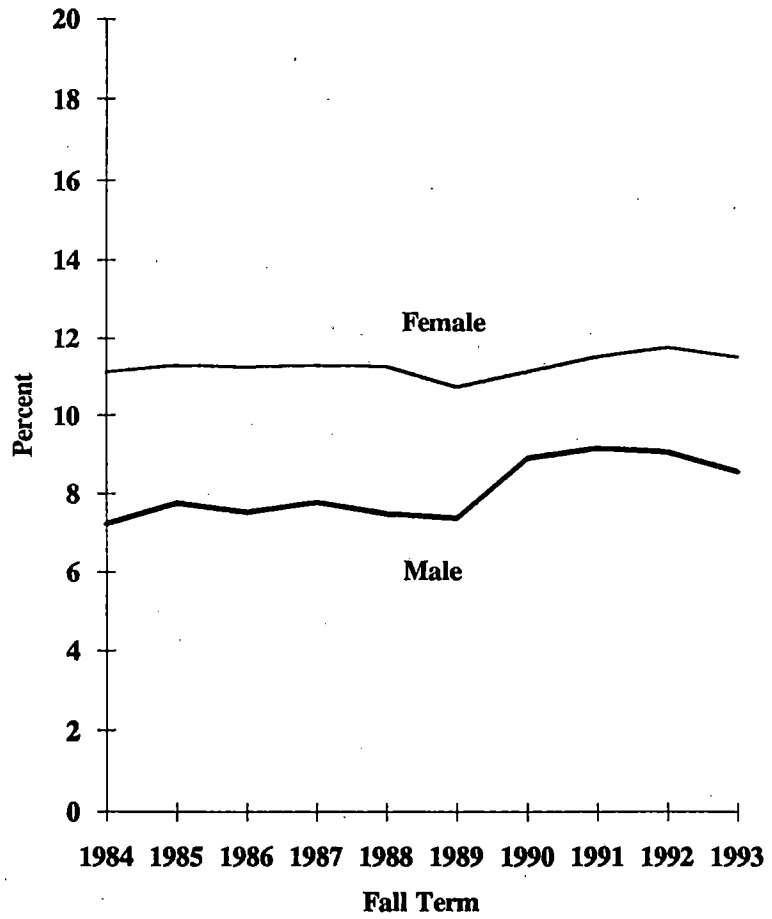


### College-Wide 38-42 Year Old Students

#### Trends in 38-42 Year Old Enrollment

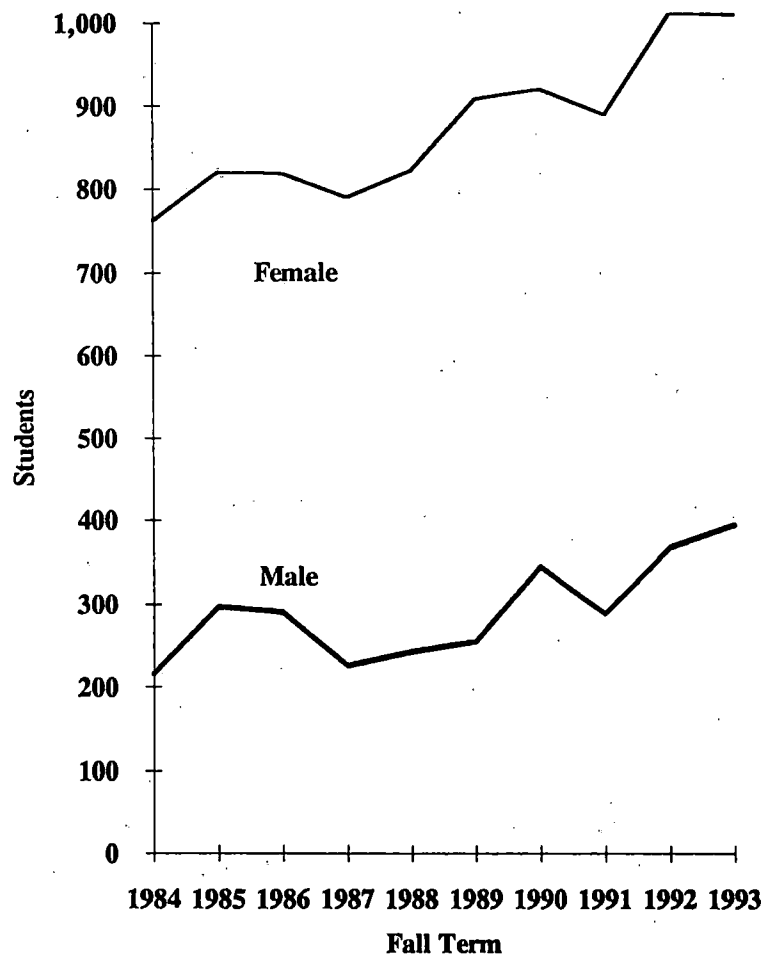


#### Percent 38-42 Year Olds in Total Enrollment

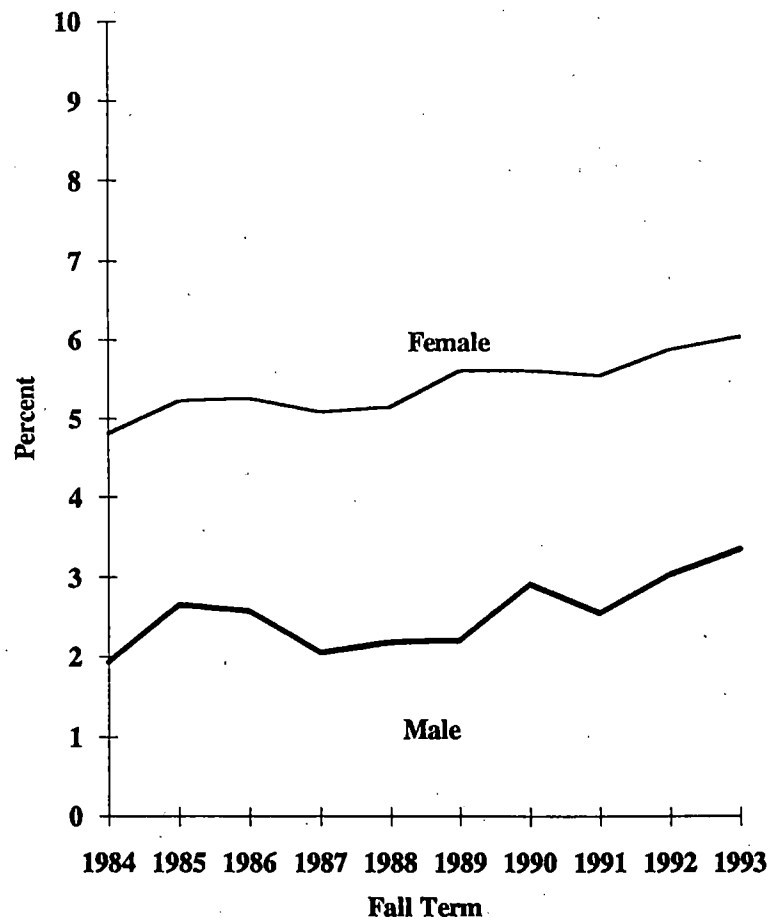


## College-Wide 43-47 Year Old Students

### Trends in 43-47 Year Old Enrollment

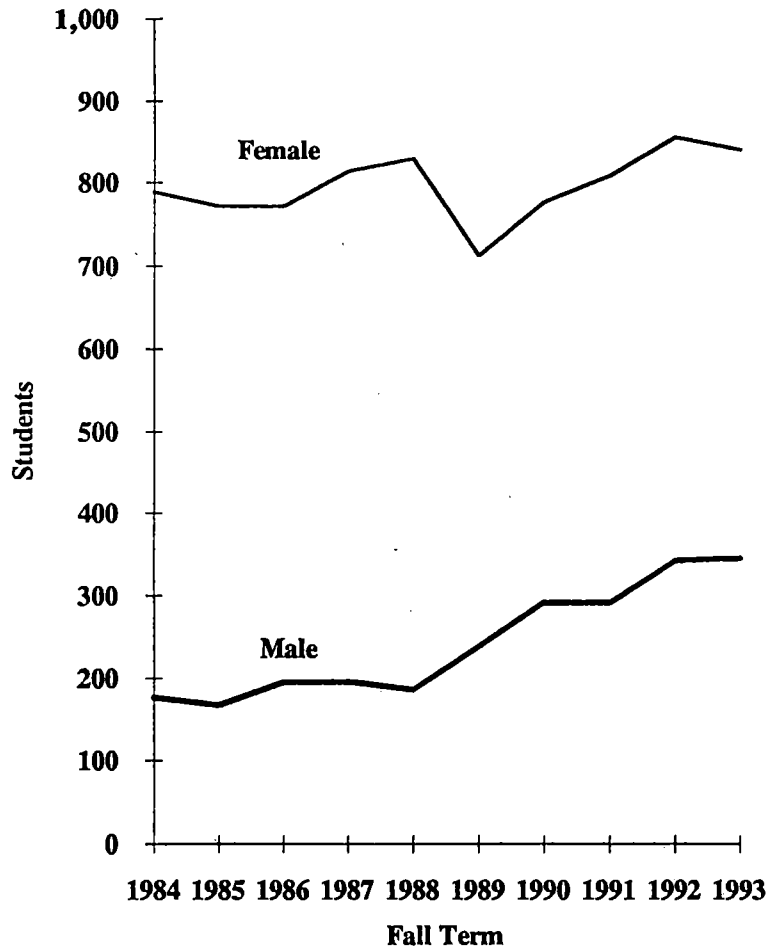


### Percent 43-47 Year Olds in Total Enrollment

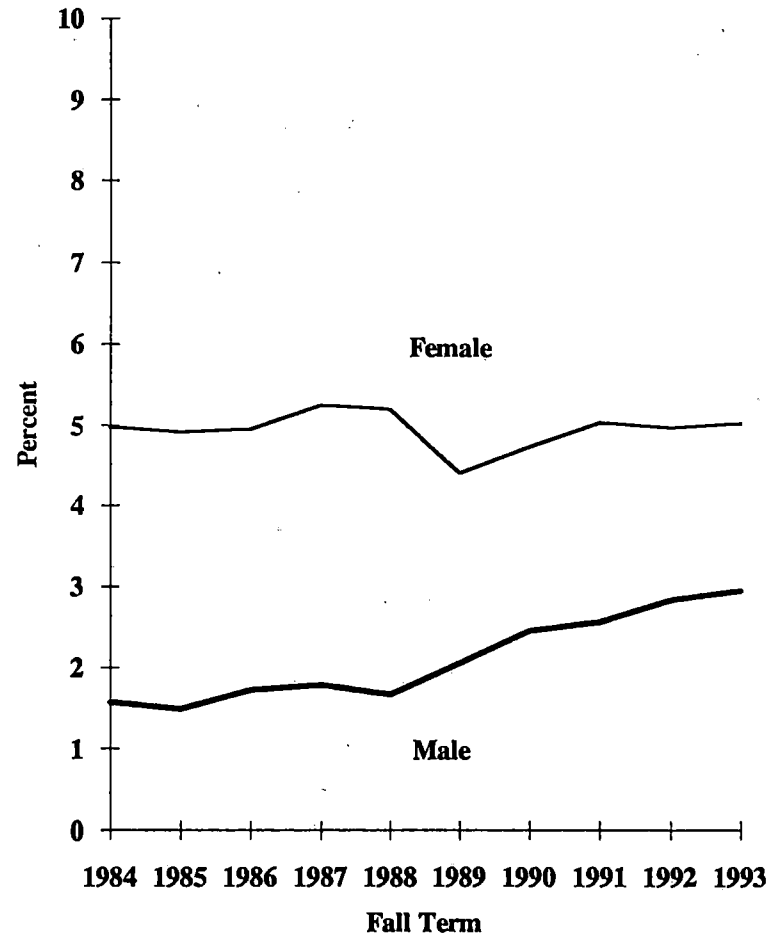


## College-Wide 48 Years & Over Students

### Trends in 48 & Over Enrollment



### Percent 48 & Over in Total Enrollment





## **Trends in Student Age**

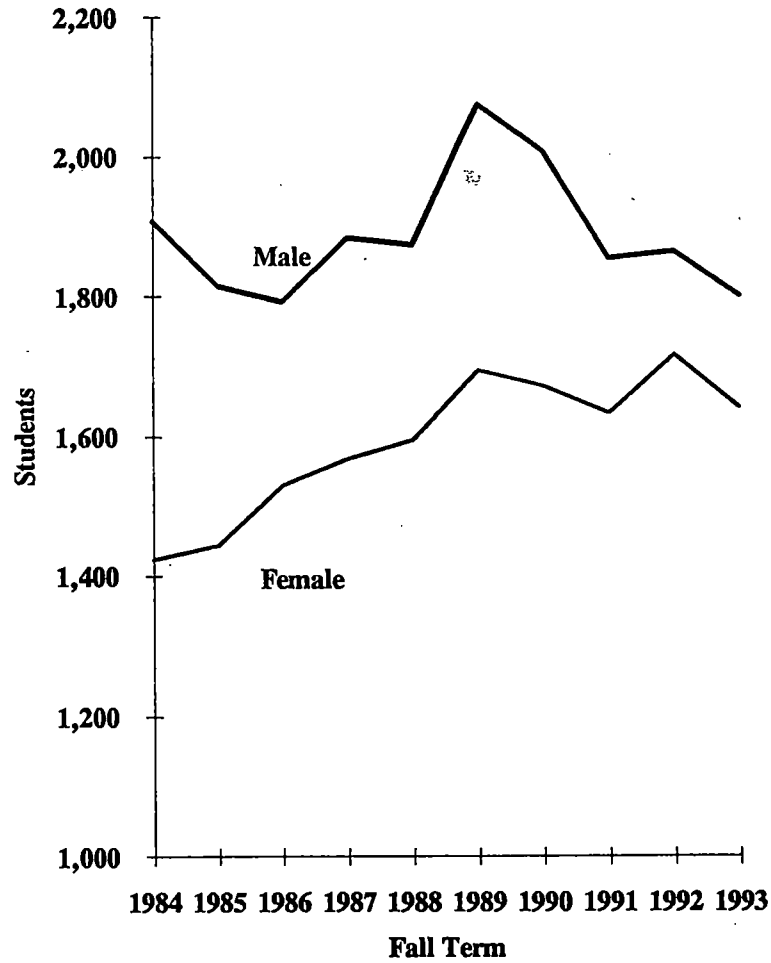
### **Auburn Hills**

## Auburn Hills

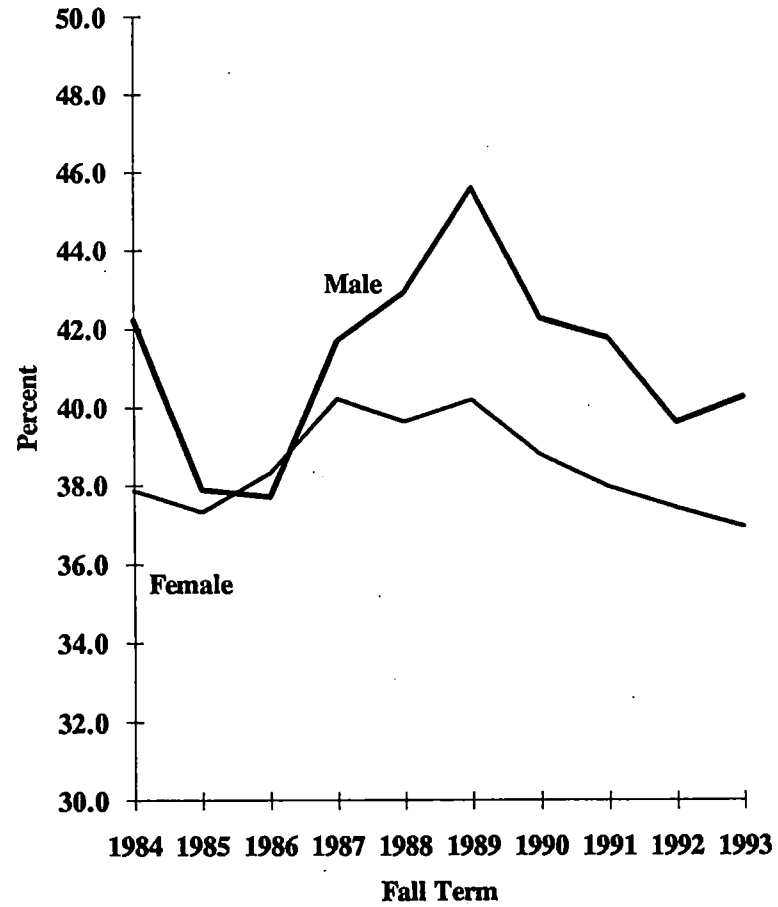
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	Percent Change	
											5-Year	10-Year
<b>Female</b>												
Under 17	11	15	10	11	8	15	15	6	7	12	-20.0	9.1
18-22	1,423	1,443	1,529	1,567	1,595	1,694	1,672	1,634	1,716	1,642	-3.1	15.4
23-27	731	657	686	662	718	758	796	796	838	830	9.5	13.5
28-32	492	510	511	500	519	532	543	537	532	536	0.8	8.9
33-37	396	425	458	420	419	425	443	466	507	467	9.9	17.9
38-42	348	376	352	326	346	362	396	413	426	418	15.5	20.1
43-47	175	225	216	217	231	261	261	236	307	307	17.6	75.4
48-Over	159	189	190	174	166	155	179	204	227	216	39.4	35.8
Unknown	22	27	39	18	22	10	5	12	25	16		
<b>Subtotal</b>	<b>3,757</b>	<b>3,867</b>	<b>3,991</b>	<b>3,895</b>	<b>4,024</b>	<b>4,212</b>	<b>4,310</b>	<b>4,304</b>	<b>4,585</b>	<b>4,444</b>		
<b>Male</b>												
Under 17	13	15	8	8	5	4	5	7	8	8	100.0	-38.5
18-22	1,908	1,815	1,792	1,884	1,874	2,077	2,008	1,854	1,865	1,801	-13.3	-5.6
23-27	1,039	1,025	1,057	1,008	940	972	952	877	1,031	1,003	3.2	-3.5
28-32	700	790	776	696	632	615	659	603	611	562	-8.6	-19.7
33-37	407	486	459	435	416	416	530	512	494	448	7.7	10.1
38-42	201	293	244	233	240	223	272	314	333	317	42.2	57.7
43-47	117	173	167	105	116	115	185	139	179	175	52.2	49.6
48-Over	102	151	159	102	106	105	131	122	153	146	39.0	43.1
Unknown	32	43	91	46	38	28	9	11	33	12		
<b>Subtotal</b>	<b>4,519</b>	<b>4,791</b>	<b>4,753</b>	<b>4,517</b>	<b>4,367</b>	<b>4,555</b>	<b>4,751</b>	<b>4,439</b>	<b>4,707</b>	<b>4,472</b>		
<b>Total</b>												
Under 17	24	30	18	19	13	19	20	13	15	20	5.3	-16.7
18-22	3,331	3,258	3,321	3,451	3,469	3,771	3,680	3,488	3,581	3,443	-8.7	3.4
23-27	1,770	1,682	1,743	1,670	1,658	1,730	1,748	1,673	1,869	1,833	6.0	3.6
28-32	1,192	1,300	1,287	1,196	1,151	1,147	1,202	1,140	1,143	1,098	-4.3	-7.9
33-37	803	911	917	855	835	841	973	978	1,001	915	8.8	13.9
38-42	549	669	596	559	586	585	668	727	759	735	25.6	33.9
43-47	292	398	383	322	347	376	446	375	486	482	28.2	65.1
48-Over	261	340	349	276	272	260	310	326	380	362	39.2	38.7
Unknown	54	70	131	64	62	39	19	459	59	28		
<b>Grand Total</b>	<b>8,276</b>	<b>8,658</b>	<b>8,745</b>	<b>8,412</b>	<b>8,393</b>	<b>8,768</b>	<b>9,066</b>	<b>9,179</b>	<b>9,293</b>	<b>8,916</b>	<b>1.7</b>	<b>7.7</b>

Auburn Hills 18-22 Year Old Students

Trends in 18-22 Year Old Enrollment

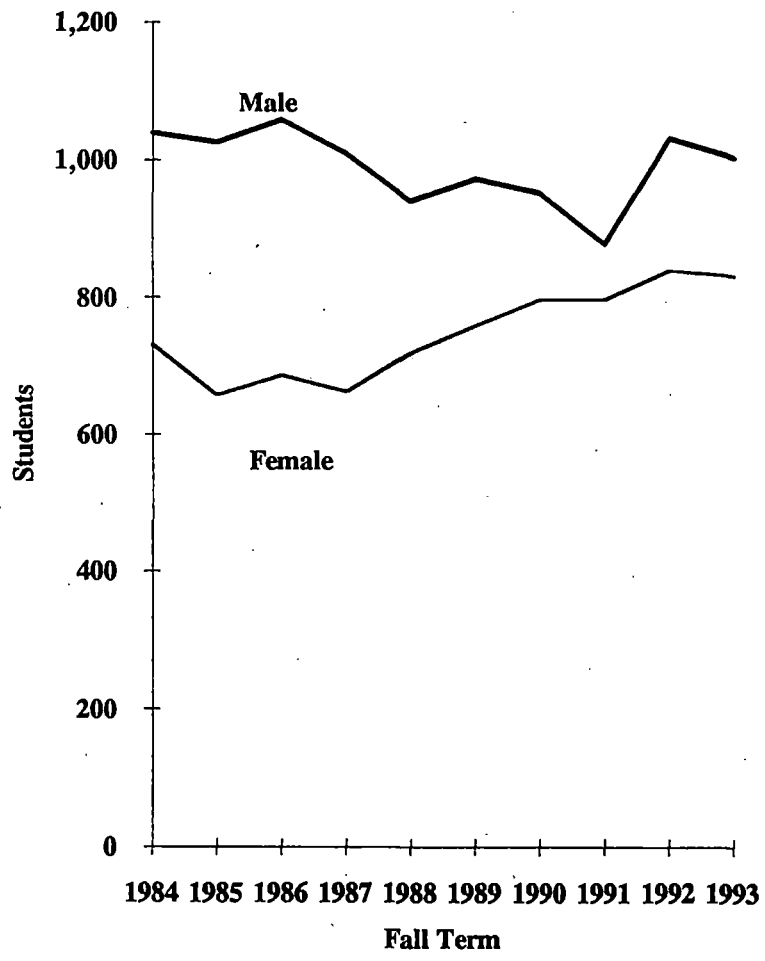


Percent 18-22 Year Olds in Total Enrollment

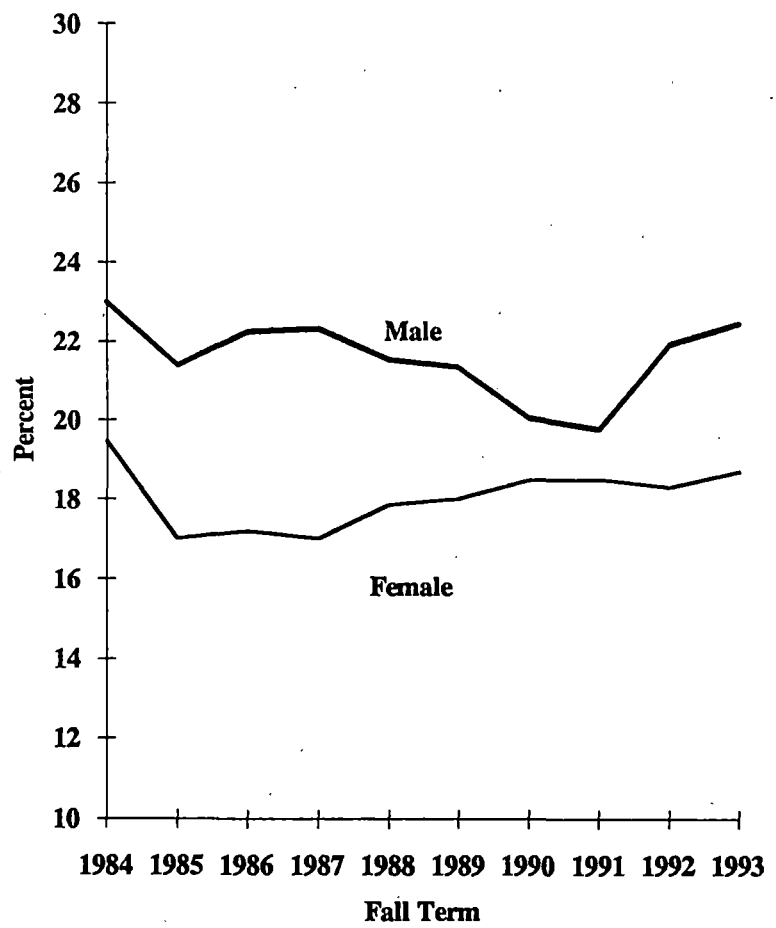


**Auburn Hills 23-27 Year Old Students**

**Trends in 23-27 Year Old Enrollment**



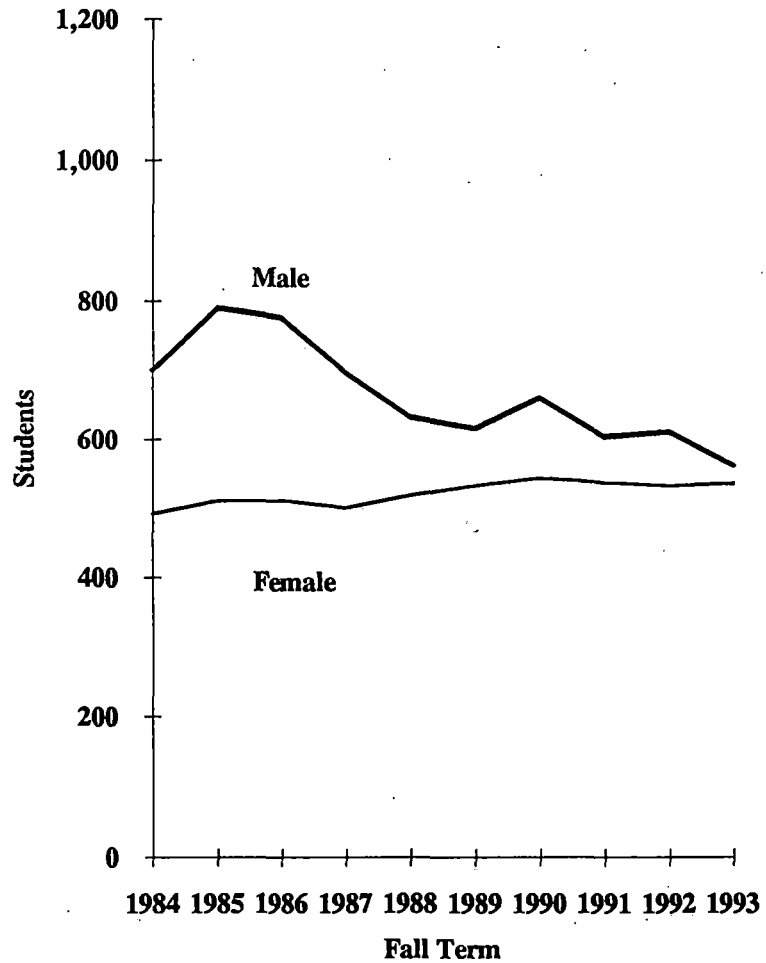
**Percent 23-27 Year Olds in Total Enrollment**



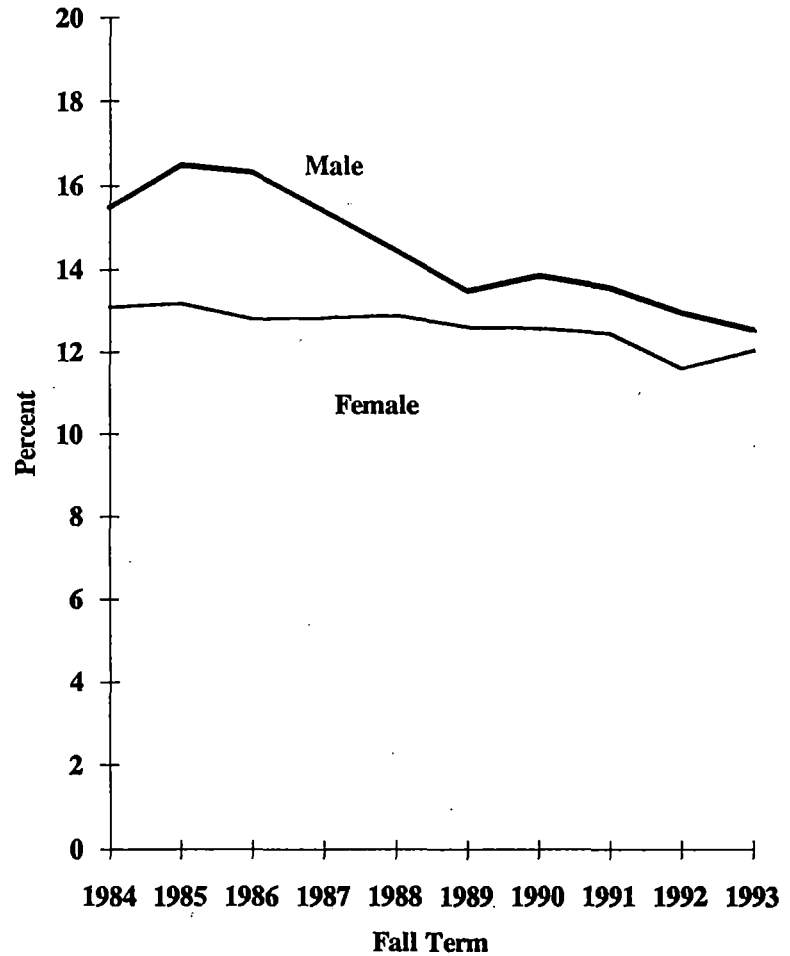


### Auburn Hills 28-32 Year Old Students

#### Trends in 28-32 Year Old Enrollment

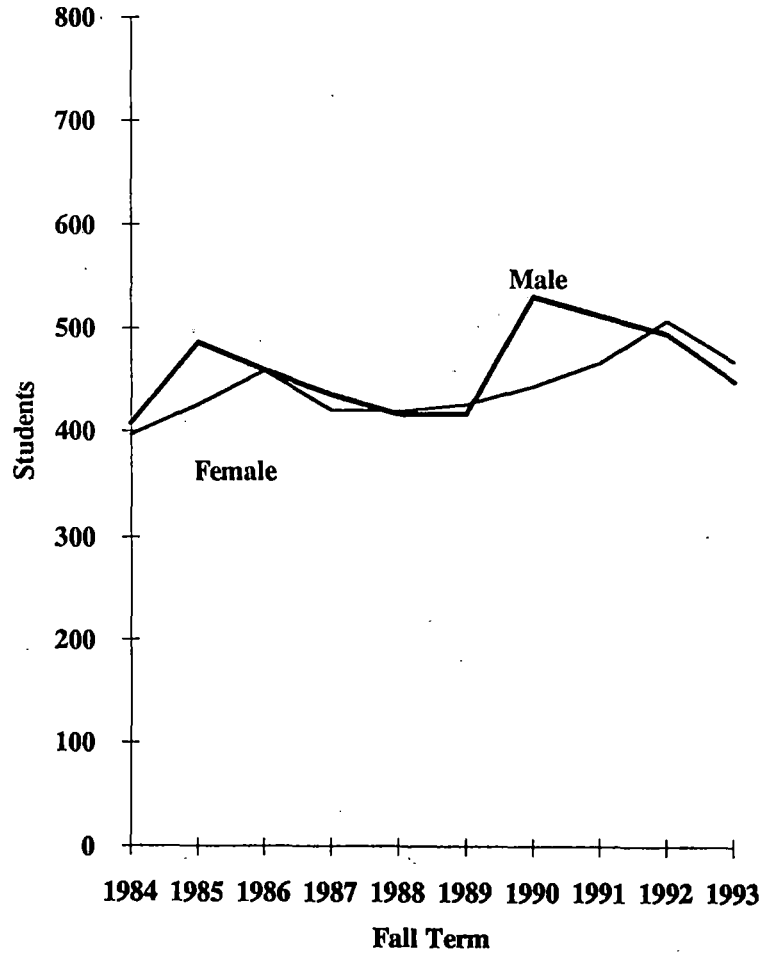


#### Percent 28-32 Year Olds in Total Enrollment

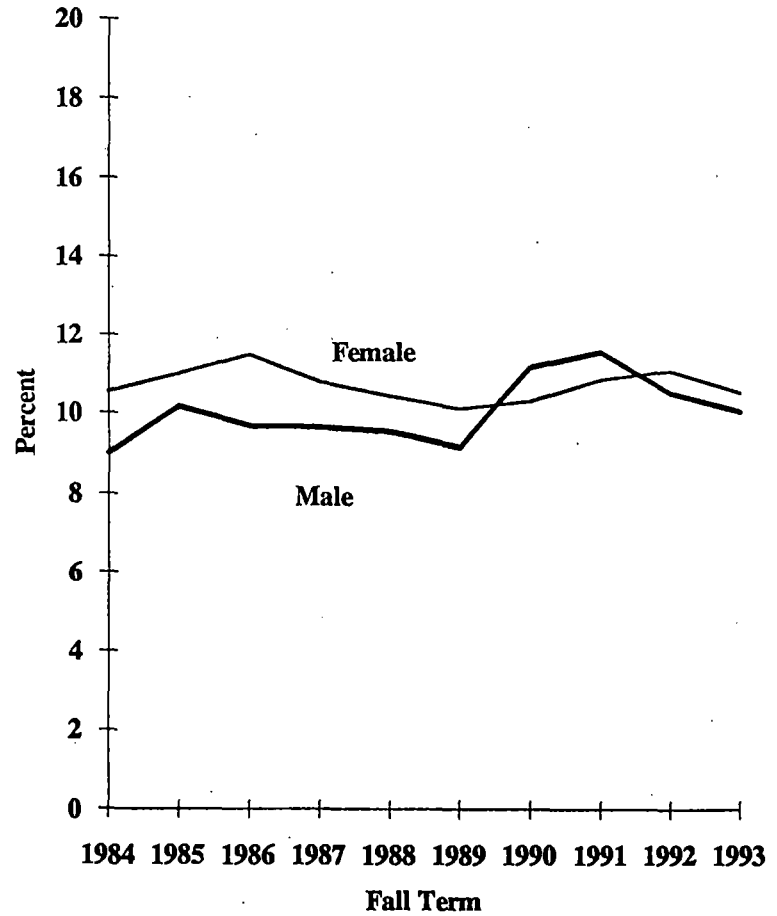


Auburn Hills 33-37 Year Old Students

Trends in 33-37 Year Old Enrollment

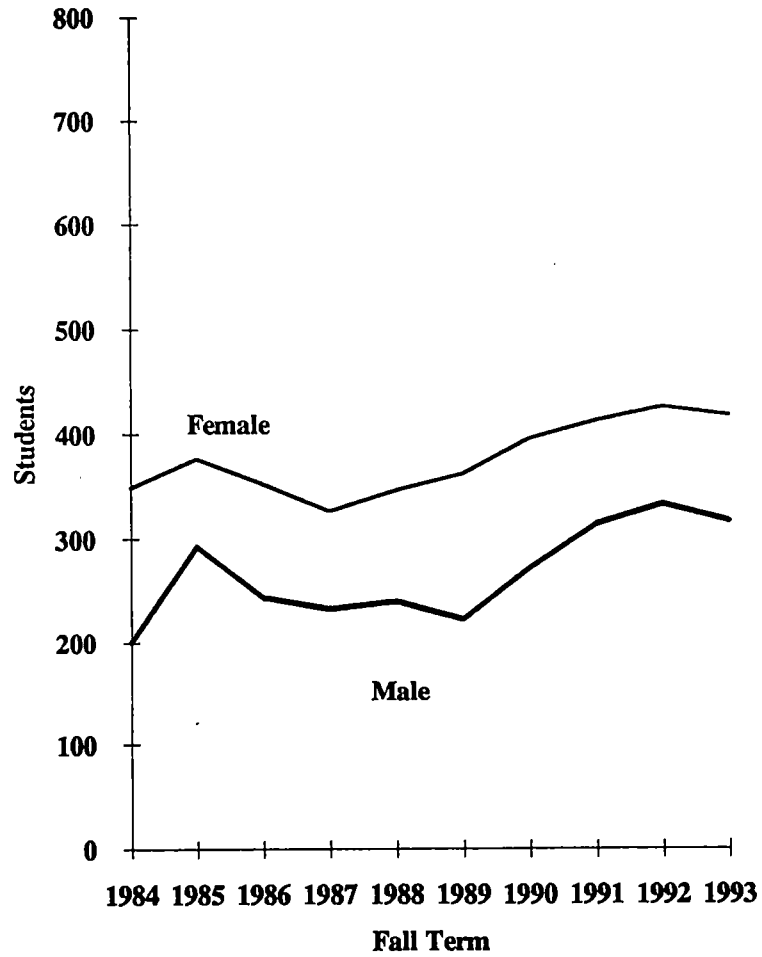


Percent 33-37 Year Olds in Total Enrollment

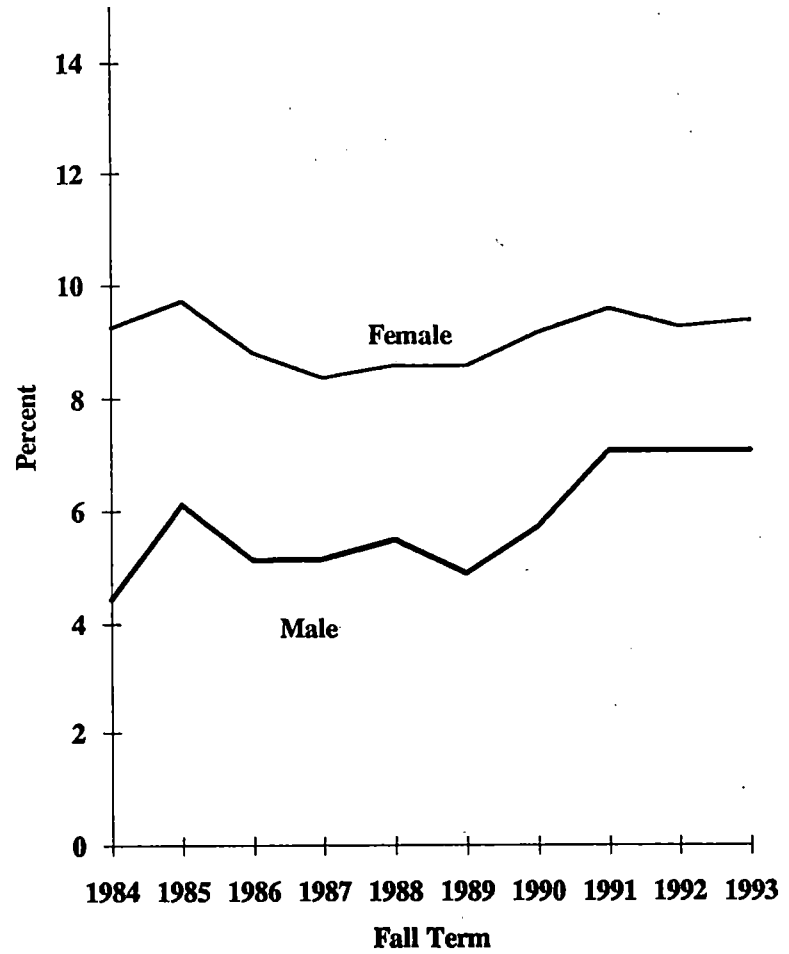


### Auburn Hills 38-42 Year Old Students

#### Trends in 38-42 Year Old Enrollment

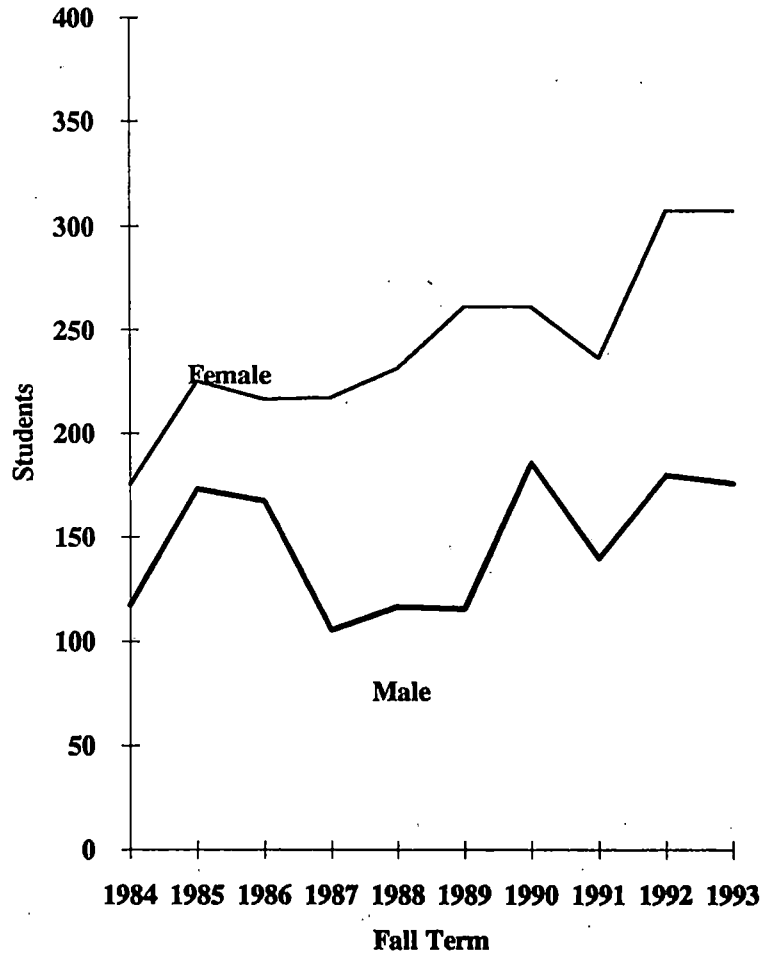


#### Percent 38-42 Year Olds in Total Enrollment

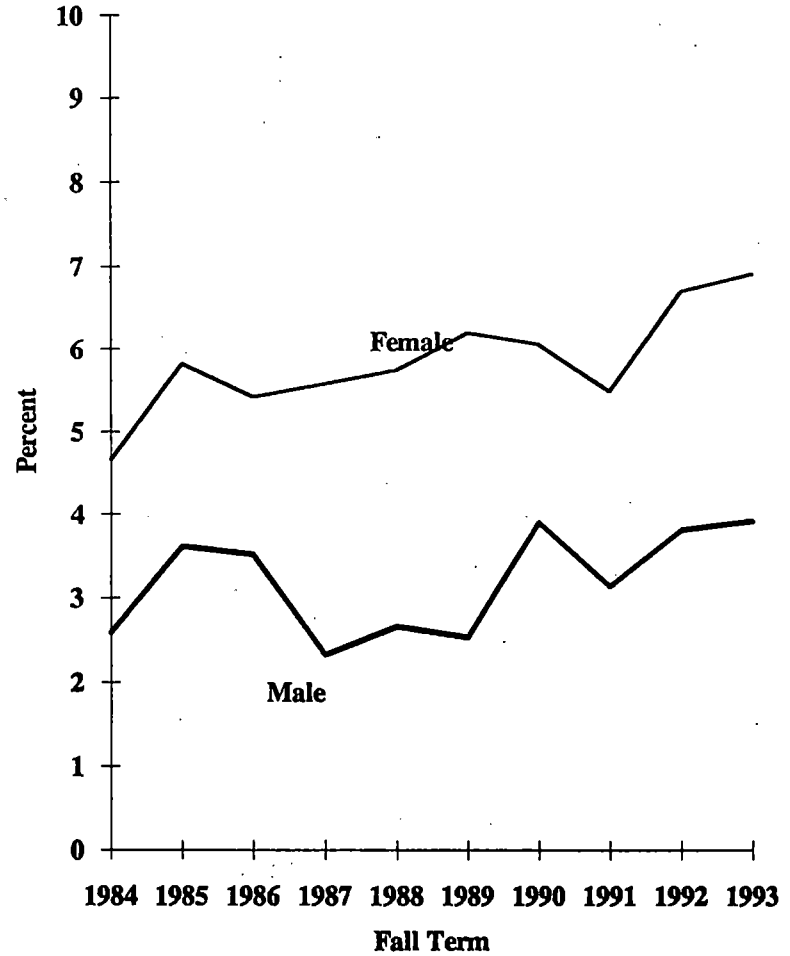


## Auburn Hills 43-47 Year Old Students

### Trends in 43-47 Year Old Enrollment

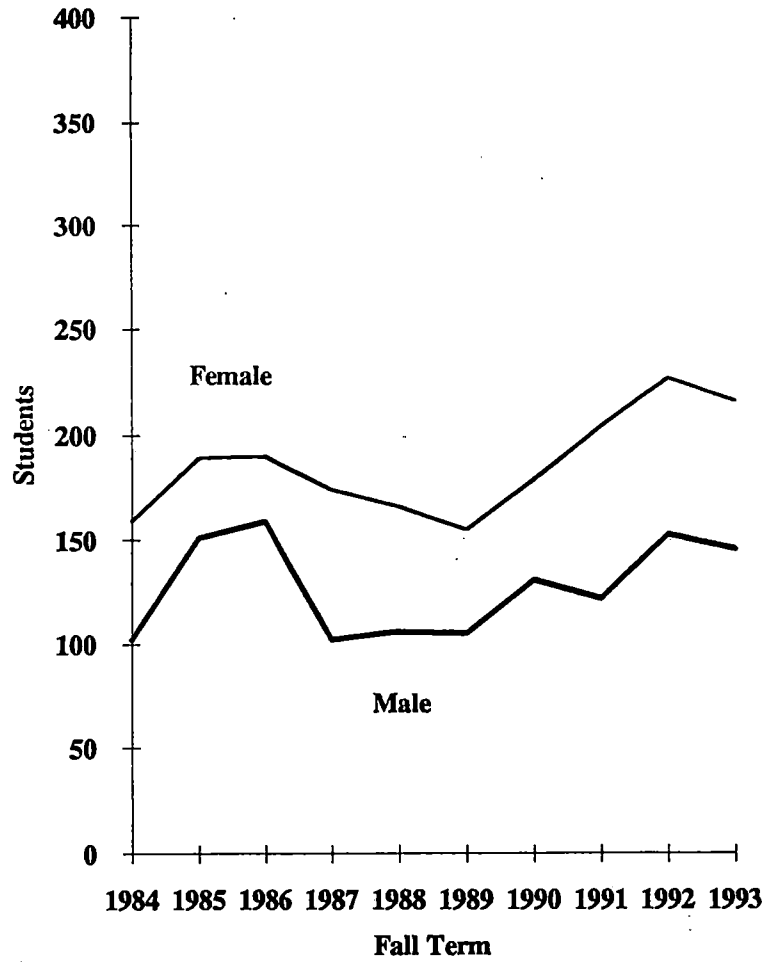


### Percent 43-47 Year Olds in Total Enrollment

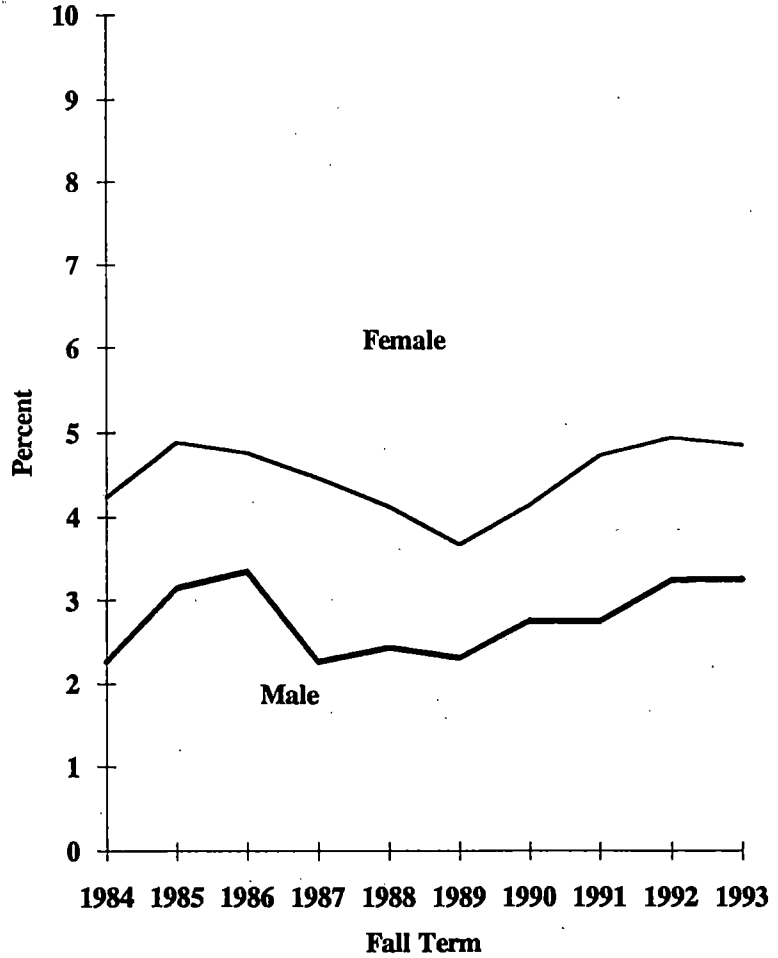


### Auburn Hills 48 Years & Over Students

#### Trends in 48 & Over Enrollment



#### Percent 48 & Over in Total Enrollment





## **Trends in Student Age**

### **Highland Lakes**

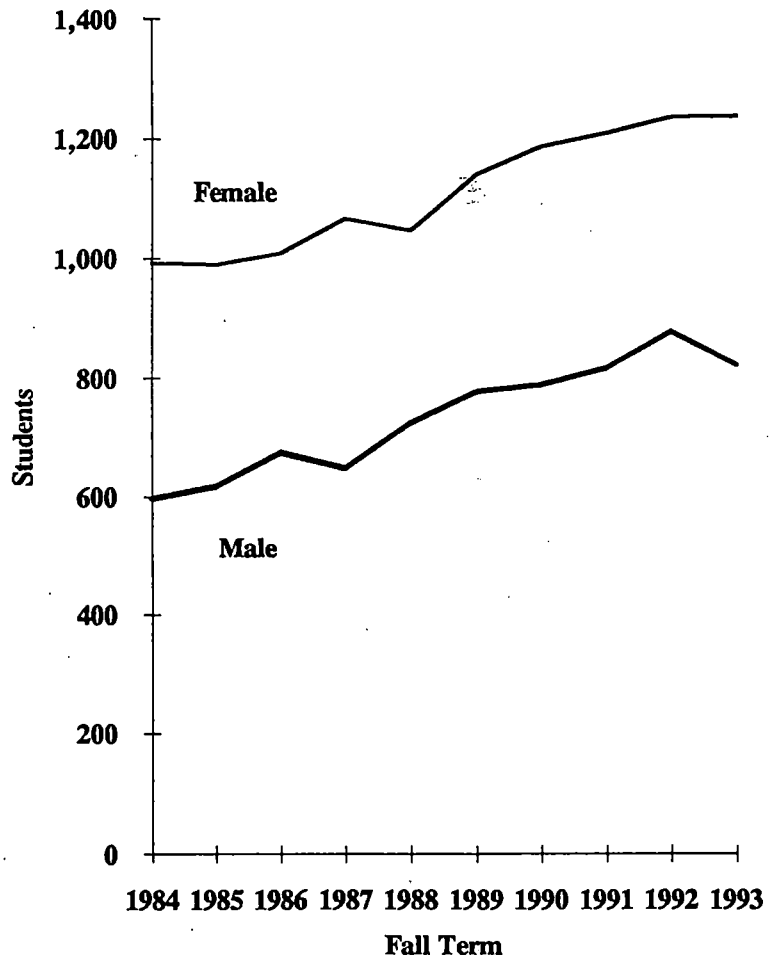
## Highland Lakes

											Percent Change	
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	5-Year	10-Year
<b>Female</b>												
Under 17	7	7	11	6	1	7	2	5	3	8	14.3	14.3
18-22	993	989	1,009	1,068	1,047	1,141	1,187	1,210	1,236	1,238	8.5	24.7
23-27	560	547	500	493	563	565	606	623	720	780	38.1	39.3
28-32	506	488	423	400	424	469	459	534	597	551	17.5	8.9
33-37	398	421	409	390	427	380	402	449	503	490	28.9	23.1
38-42	285	273	274	274	254	266	324	351	397	398	49.6	39.6
43-47	160	175	188	160	169	184	176	177	218	202	9.8	26.3
48-Over	98	96	104	99	114	124	134	150	140	147	18.5	50.0
Unknown	25	25	29	21	20	7	2	6	8	6		
<b>Subtotal</b>	<b>3,032</b>	<b>3,021</b>	<b>2,947</b>	<b>2,911</b>	<b>3,019</b>	<b>3,143</b>	<b>3,292</b>	<b>3,505</b>	<b>3,822</b>	<b>3,820</b>		
<b>Male</b>												
Under 17	6	5	9	7	7	3	4	4	7	6	100.0	0.0
18-22	596	617	674	647	724	777	789	817	878	822	5.8	37.9
23-27	218	231	246	250	231	252	271	312	336	363	44.0	66.5
28-32	156	147	129	113	135	161	161	166	170	193	19.9	23.7
33-37	67	90	83	72	66	77	122	142	142	133	72.7	98.5
38-42	44	40	48	44	39	46	64	78	106	74	60.9	68.2
43-47	20	32	25	24	32	33	33	35	47	49	48.5	145.0
48-Over	28	25	30	42	28	32	35	20	37	47	46.9	67.9
Unknown	6	12	15	14	7	6	2	4	11	7		
<b>Subtotal</b>	<b>1,141</b>	<b>1,199</b>	<b>1,259</b>	<b>1,213</b>	<b>1,269</b>	<b>1,387</b>	<b>1,481</b>	<b>1,578</b>	<b>1,734</b>	<b>1,694</b>		
<b>Total</b>												
Under 17	13	12	20	13	8	10	6	9	10	14	40.0	7.7
18-22	1,589	1,606	1,683	1,715	1,771	1,918	1,976	2,027	2,114	2,060	7.4	29.6
23-27	778	778	746	743	794	817	877	935	1,056	1,143	39.9	46.9
28-32	662	635	552	513	559	630	620	700	767	744	18.1	12.4
33-37	465	511	492	462	493	457	524	591	645	623	36.3	34.0
38-42	329	313	322	318	293	312	388	429	503	472	51.3	43.5
43-47	180	207	213	184	201	217	209	212	265	251	15.7	39.4
48-Over	126	121	134	141	142	156	169	170	177	194	24.4	54.0
Unknown	31	37	44	35	32	13	5	187	20	15		
<b>Grand Total</b>	<b>4,173</b>	<b>4,220</b>	<b>4,206</b>	<b>4,124</b>	<b>4,293</b>	<b>4,530</b>	<b>4,774</b>	<b>5,260</b>	<b>5,557</b>	<b>5,516</b>	<b>21.8</b>	<b>32.2</b>

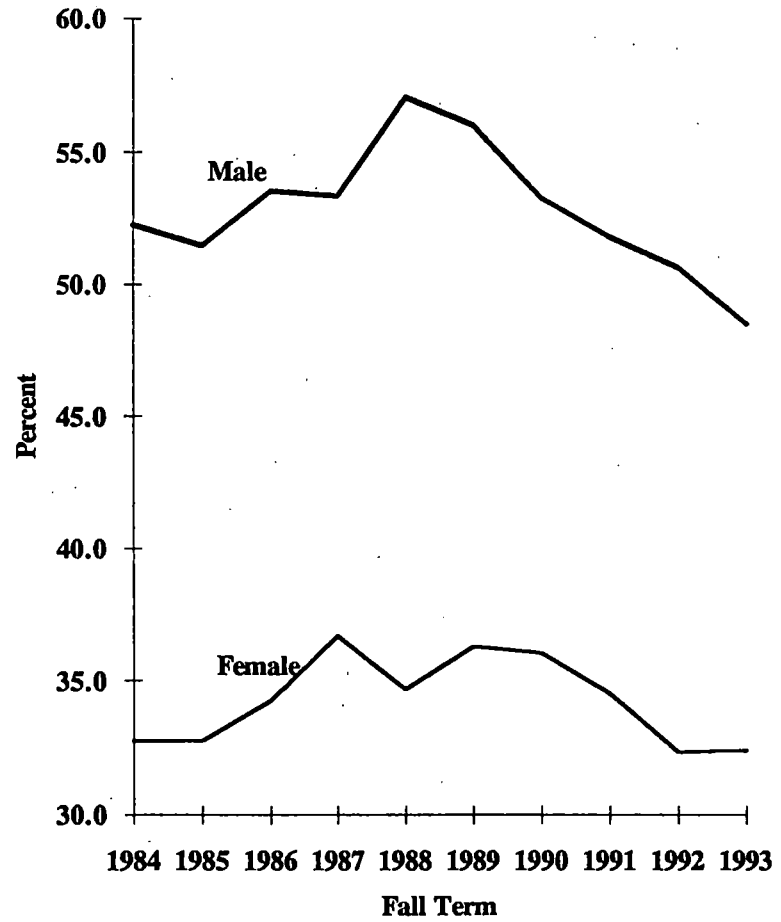


### Highland Lakes 18-22 Year Old Students

#### Trends in 18-22 Year Old Enrollment

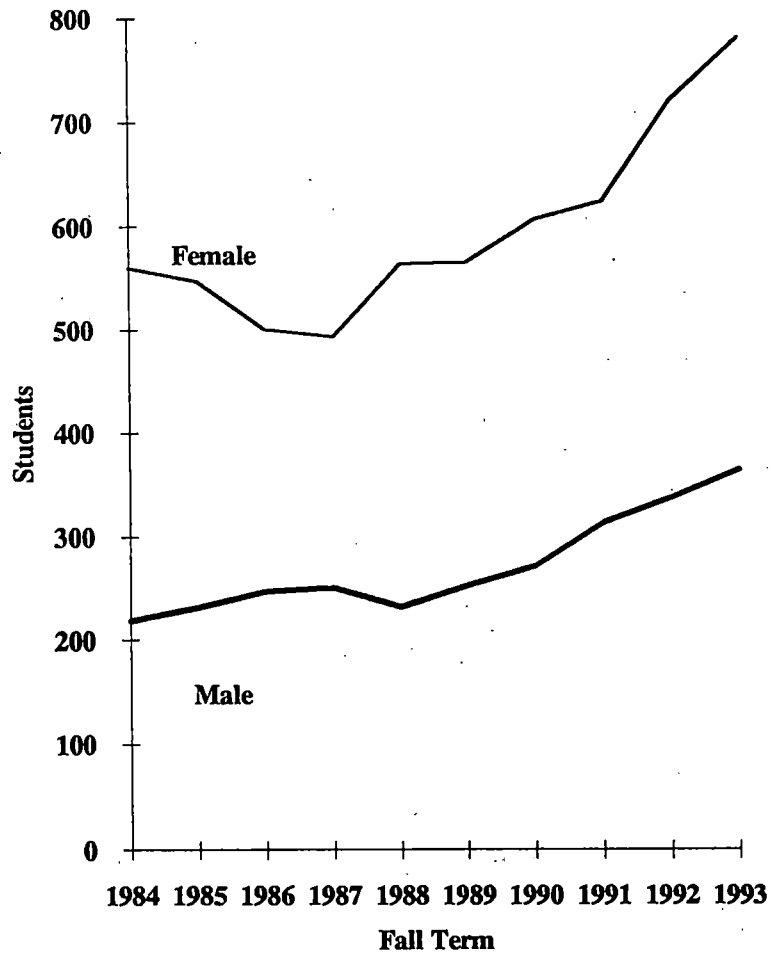


#### Percent 18-22 Year Olds in Total Enrollment

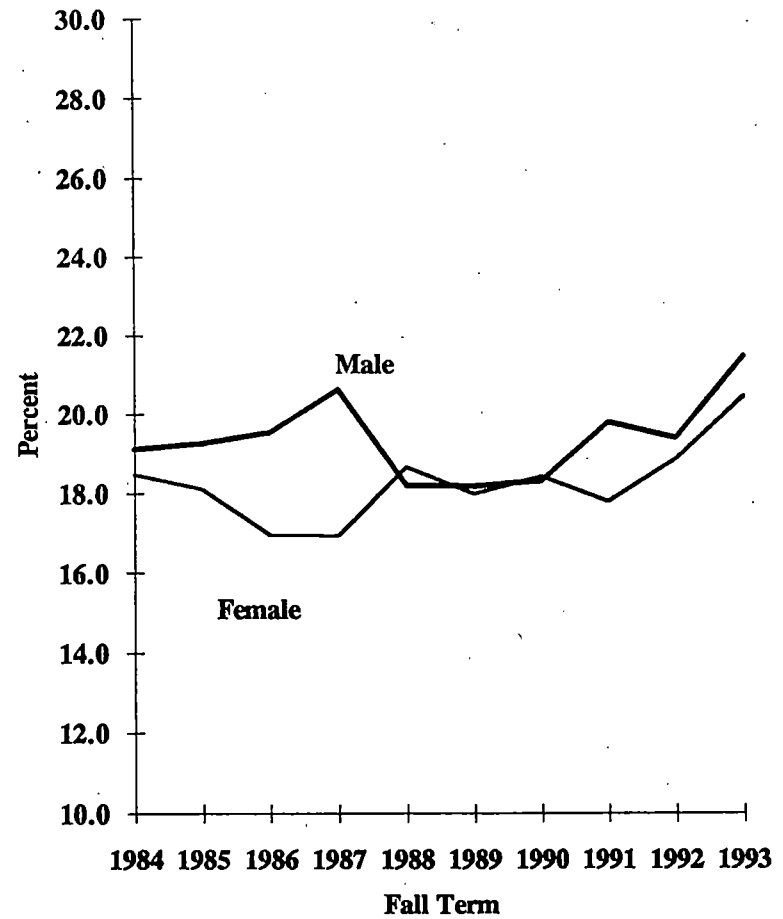


## Highland Lakes 23-27 Year Old Students

### Trends in 23-27 Year Old Enrollment

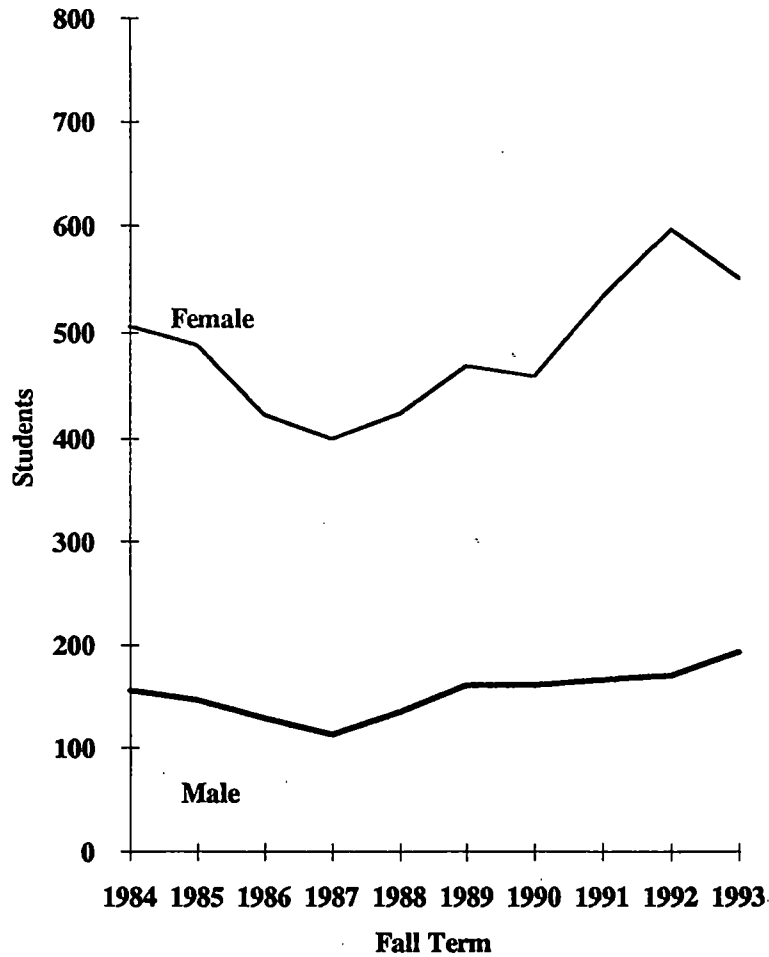


### Percent 23-27 Year Olds in Total Enrollment

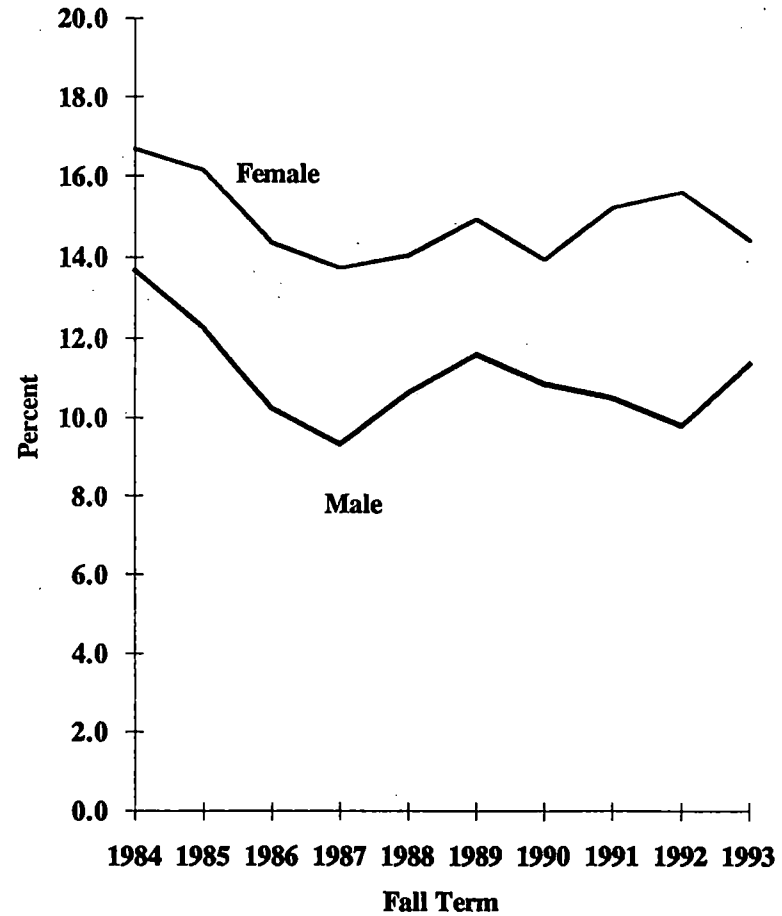


### Highland Lakes 28-32 Year Old Students

#### Trends in 28-32 Year Old Enrollment

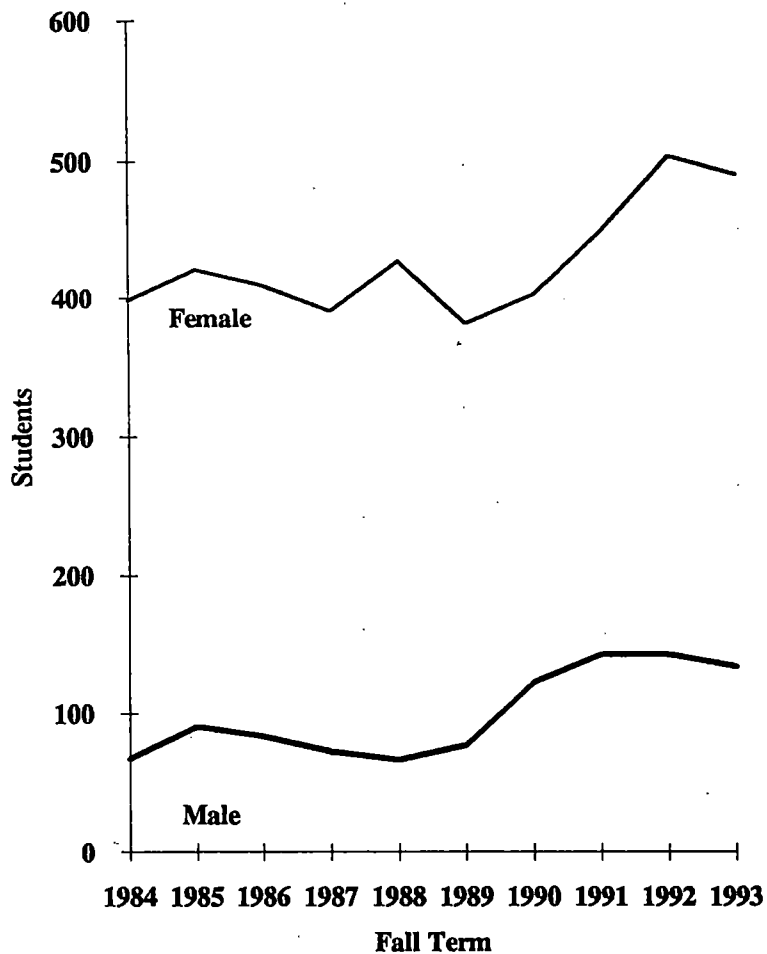


#### Percent 28-32 Year Olds in Total Enrollment

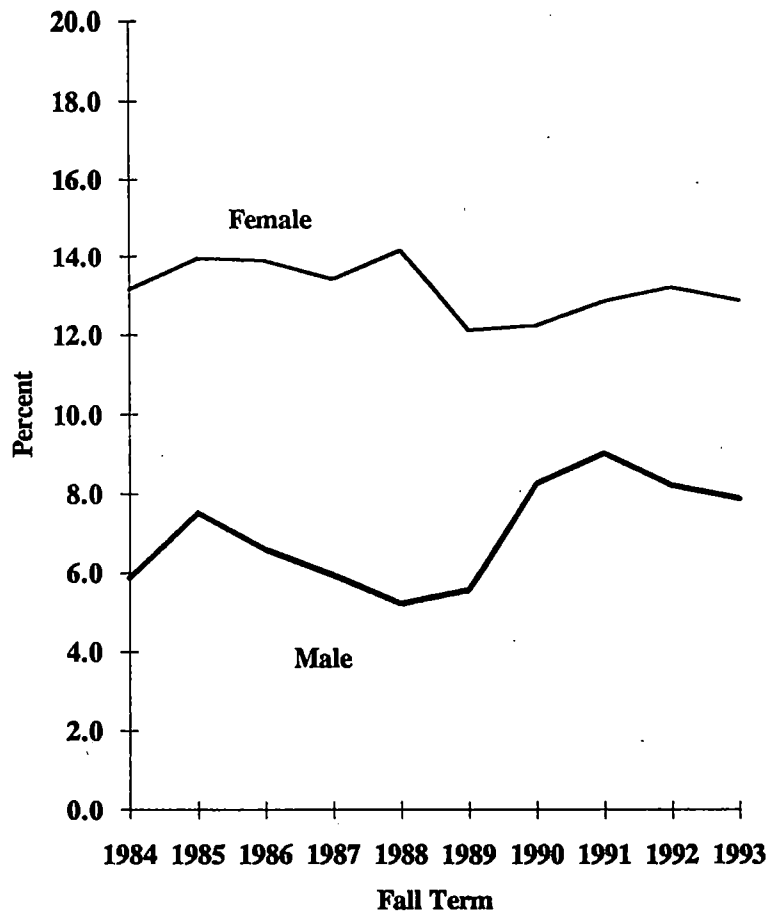


# Highland Lakes 33-37 Year Old Students

## Trends in 33-37 Year Old Enrollment

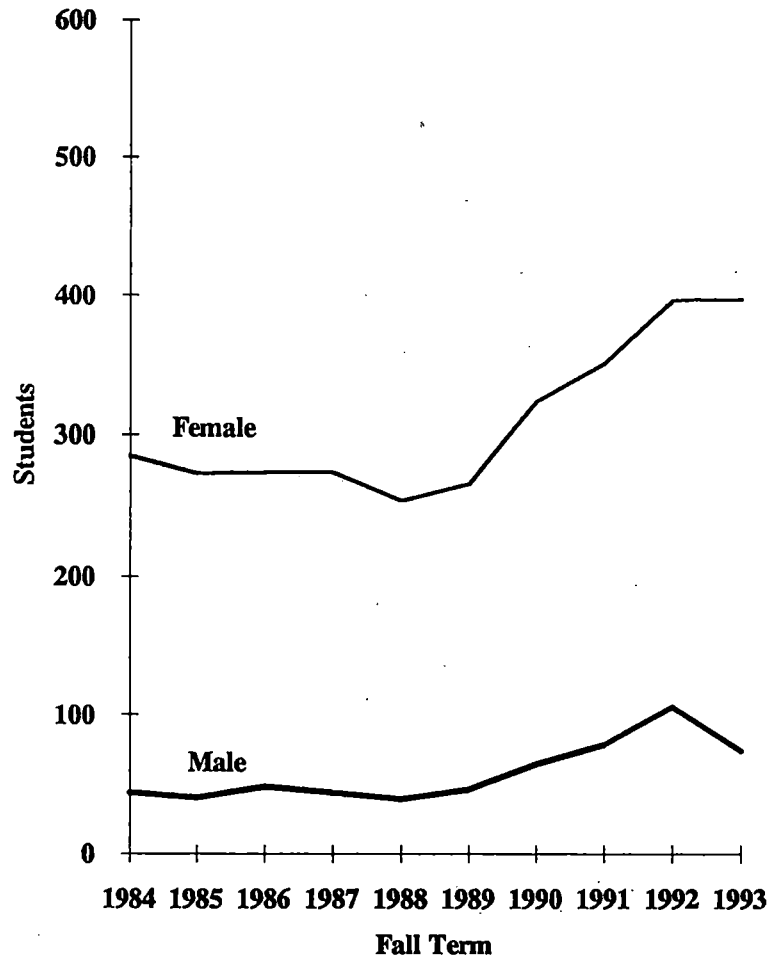


## Percent 33-37 Year Olds in Total Enrollment

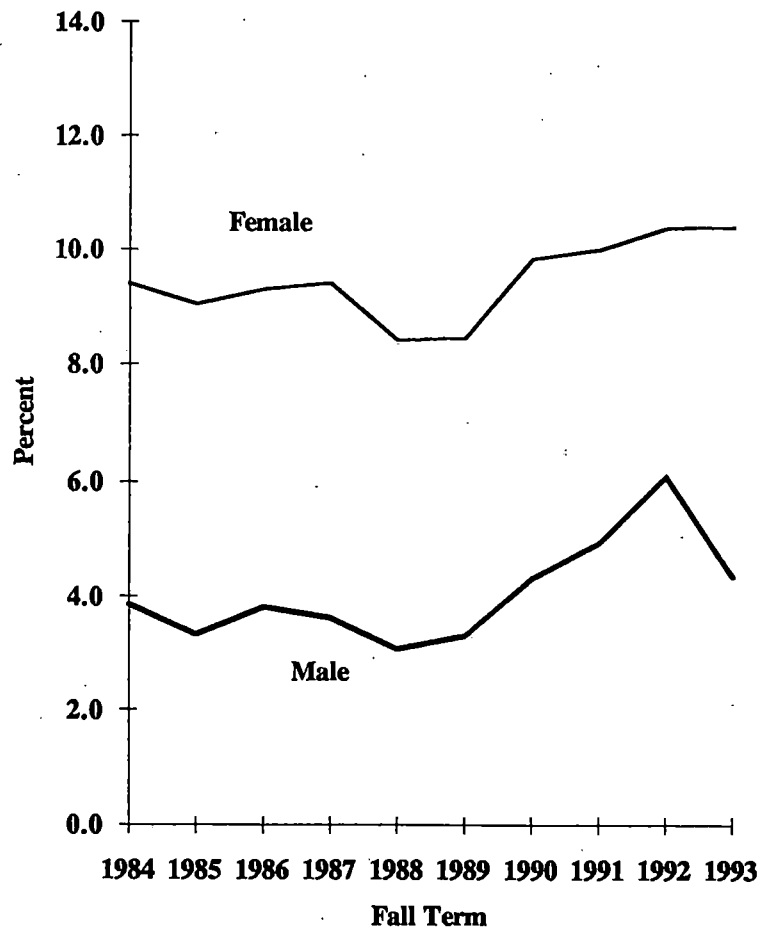


### Highland Lakes 38-42 Year Old Students

Trends in 38-42 Year Old Enrollment

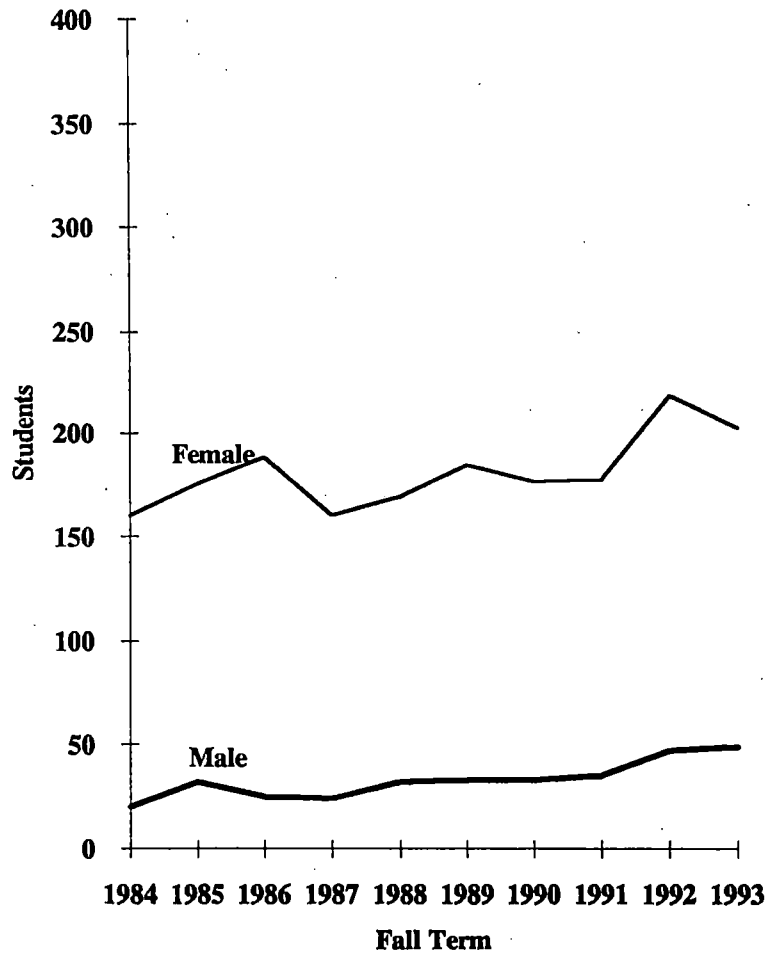


Percent 38-42 Year Olds in Total Enrollment

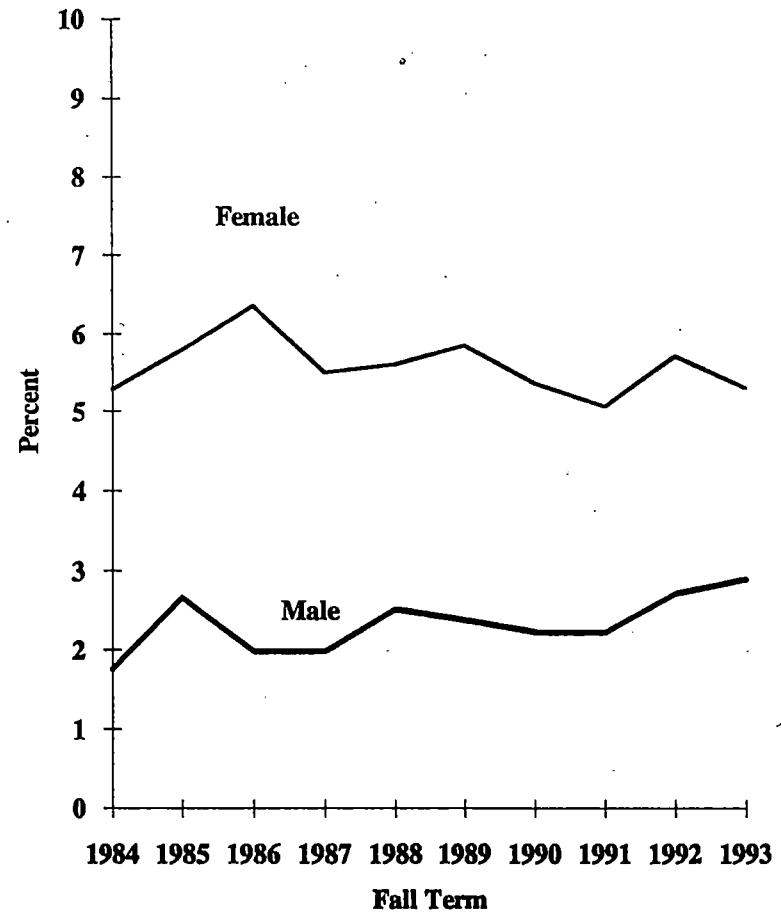


## Highland Lakes 43-47 Year Old Students

### Trends in 43-47 Year Old Enrollment

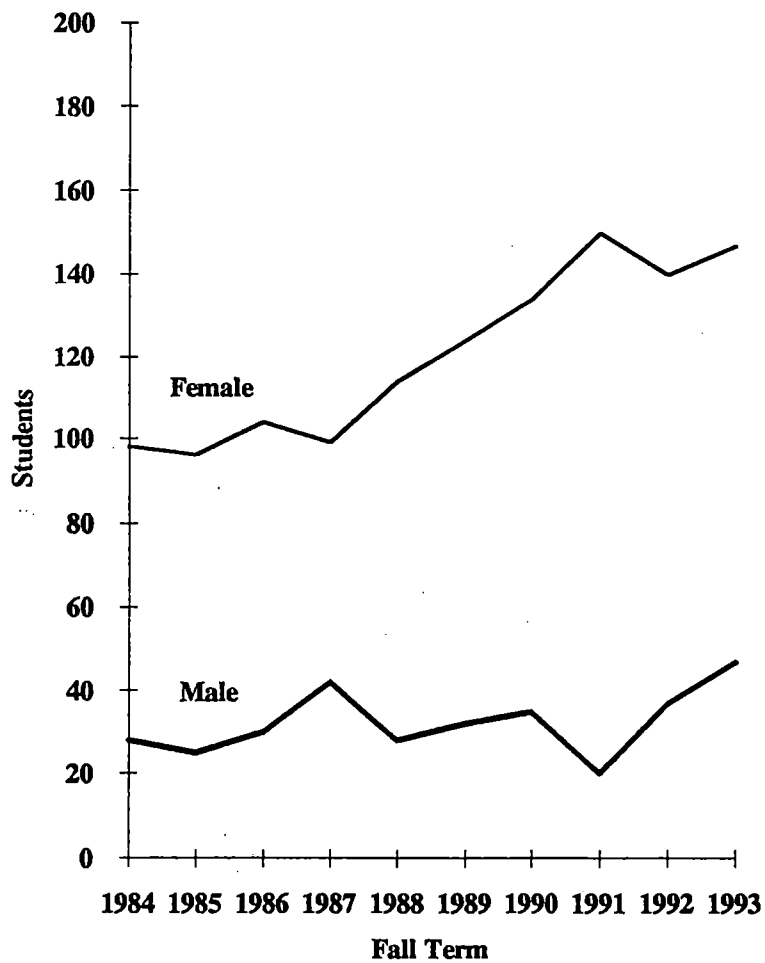


### Percent 43-47 Year Olds in Total Enrollment

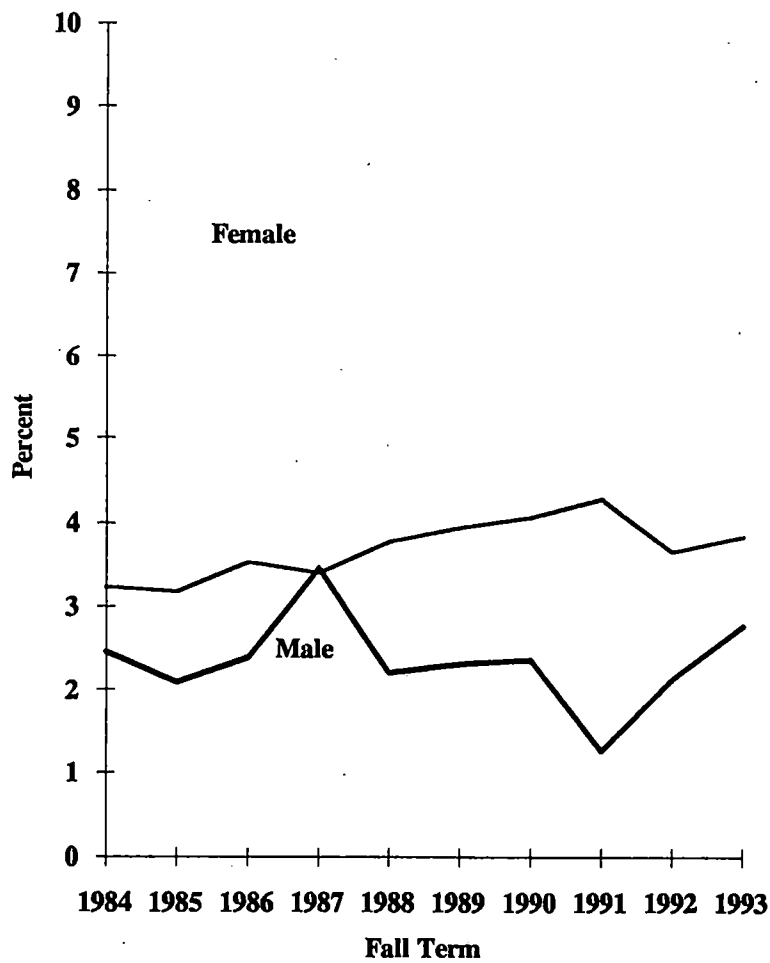


### Highland Lakes 48 Years & Over Students

#### Trends in 48 & Over Enrollment



#### Percent 48 & Over in Total Enrollment







## **Trends in Student Age**

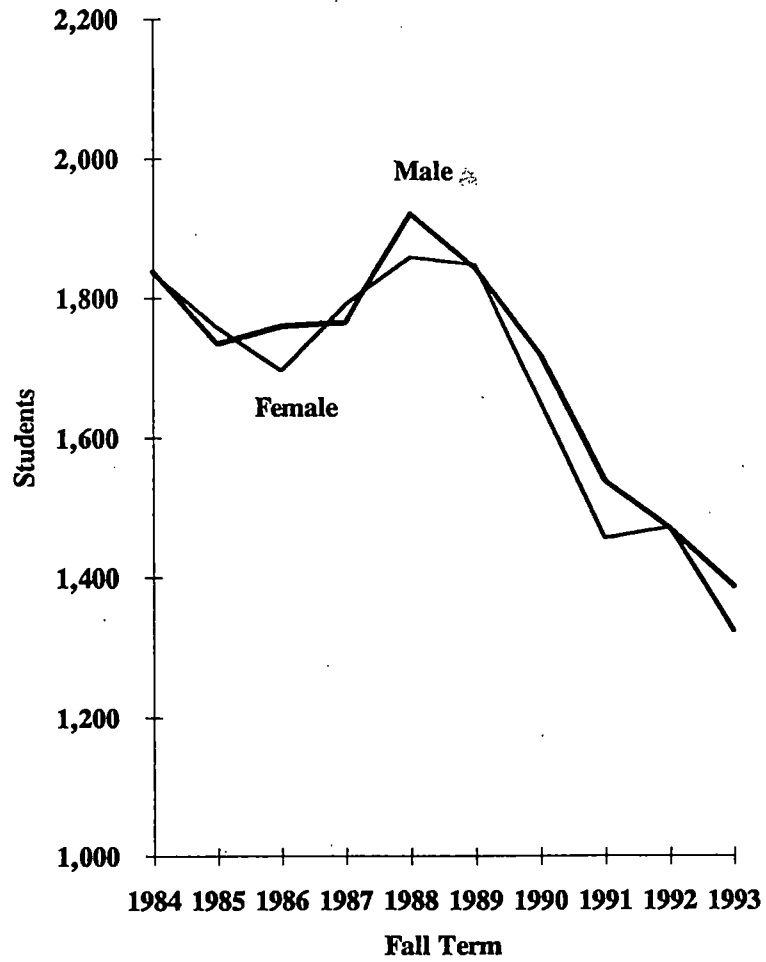
### **Orchard Ridge**

## Orchard Ridge

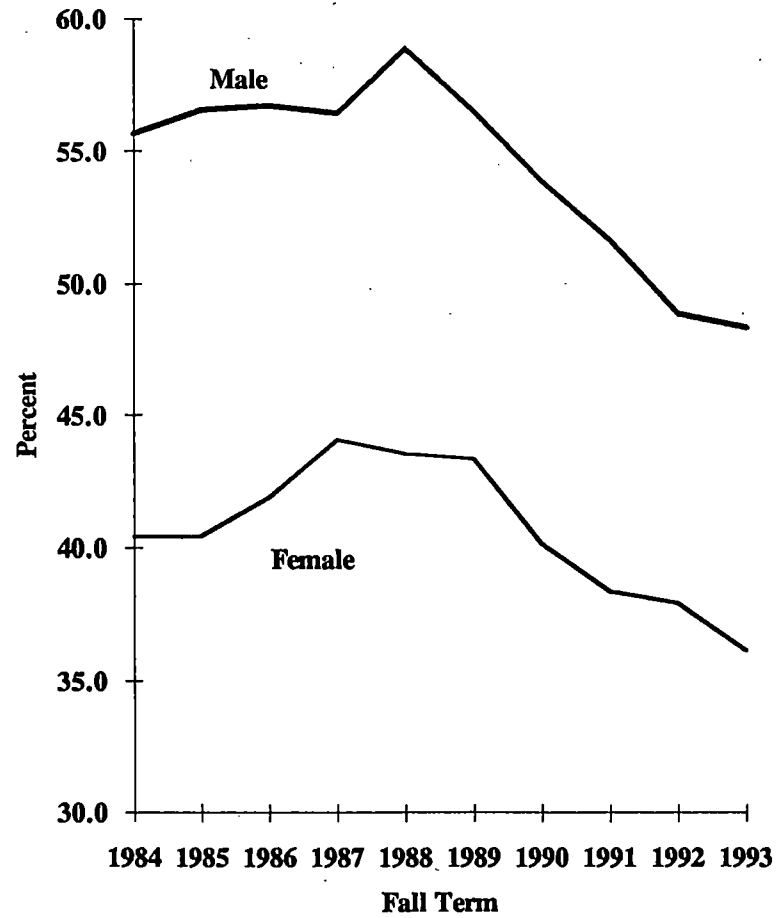
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	Percent Change	
											5-Year	10-Year
<b>Female</b>												
Under 17	17	22	26	26	13	24	24	14	26	26	8.3	52.9
18-22	1,835	1,759	1,697	1,791	1,858	1,847	1,652	1,455	1,471	1,324	-28.3	-27.8
23-27	875	846	771	709	807	800	802	749	762	766	-4.3	-12.5
28-32	558	540	489	458	493	492	495	495	514	463	-5.9	-17.0
33-37	440	420	381	387	379	406	419	401	402	376	-7.4	-14.5
38-42	367	308	272	279	307	303	316	280	282	285	-5.9	-22.3
43-47	228	215	199	194	192	195	211	198	192	206	5.6	-9.6
48-Over	183	191	178	192	199	182	189	183	211	202	11.0	10.4
Unknown	38	49	37	27	19	12	8	15	16	14		
<b>Subtotal</b>	<b>4,541</b>	<b>4,350</b>	<b>4,050</b>	<b>4,063</b>	<b>4,267</b>	<b>4,261</b>	<b>4,116</b>	<b>3,790</b>	<b>3,876</b>	<b>3,662</b>		
<b>Male</b>												
Under 17	17	22	15	21	18	24	19	17	14	22	-8.3	29.4
18-22	1,838	1,736	1,761	1,766	1,921	1,842	1,721	1,537	1,470	1,387	-24.7	-24.5
23-27	738	647	661	656	658	689	696	695	704	704	2.2	-4.6
28-32	320	287	306	290	297	311	305	306	343	304	-2.3	-5.0
33-37	172	152	141	163	159	171	200	175	213	183	7.0	6.4
38-42	74	82	79	99	82	95	105	102	111	109	14.7	47.3
43-47	45	46	43	49	54	58	71	62	71	77	32.8	71.1
48-Over	62	62	62	62	50	53	69	67	66	64	20.8	3.2
Unknown	36	36	36	23	23	16	8	15	13	17		
<b>Subtotal</b>	<b>3,302</b>	<b>3,070</b>	<b>3,104</b>	<b>3,129</b>	<b>3,262</b>	<b>3,259</b>	<b>3,194</b>	<b>2,976</b>	<b>3,005</b>	<b>2,867</b>		
<b>Total</b>												
Under 17	34	44	41	47	31	48	43	31	40	48	0.0	41.2
18-22	3,673	3,495	3,458	3,557	3,779	3,689	3,373	2,992	2,941	2,711	-26.5	-26.2
23-27	1,613	1,493	1,432	1,365	1,465	1,489	1,498	1,444	1,466	1,470	-1.3	-8.9
28-32	878	827	795	748	790	803	800	801	857	767	-4.5	-12.6
33-37	612	572	522	550	538	577	619	576	615	559	-3.1	-8.7
38-42	441	390	351	378	389	398	421	382	393	394	-1.0	-10.7
43-47	273	261	242	243	246	253	282	260	263	283	11.9	3.7
48-Over	245	253	240	254	249	235	258	250	277	266	13.2	8.6
Unknown	74	85	73	50	59	29	18	493	44	32		
<b>Grand Total</b>	<b>7,843</b>	<b>7,420</b>	<b>7,154</b>	<b>7,192</b>	<b>7,546</b>	<b>7,521</b>	<b>7,312</b>	<b>7,229</b>	<b>6,896</b>	<b>6,530</b>	<b>-13.2</b>	<b>-16.7</b>

### Orchard Ridge 18-22 Year Old Students

**Trends in 18-22 Year Old Enrollment**

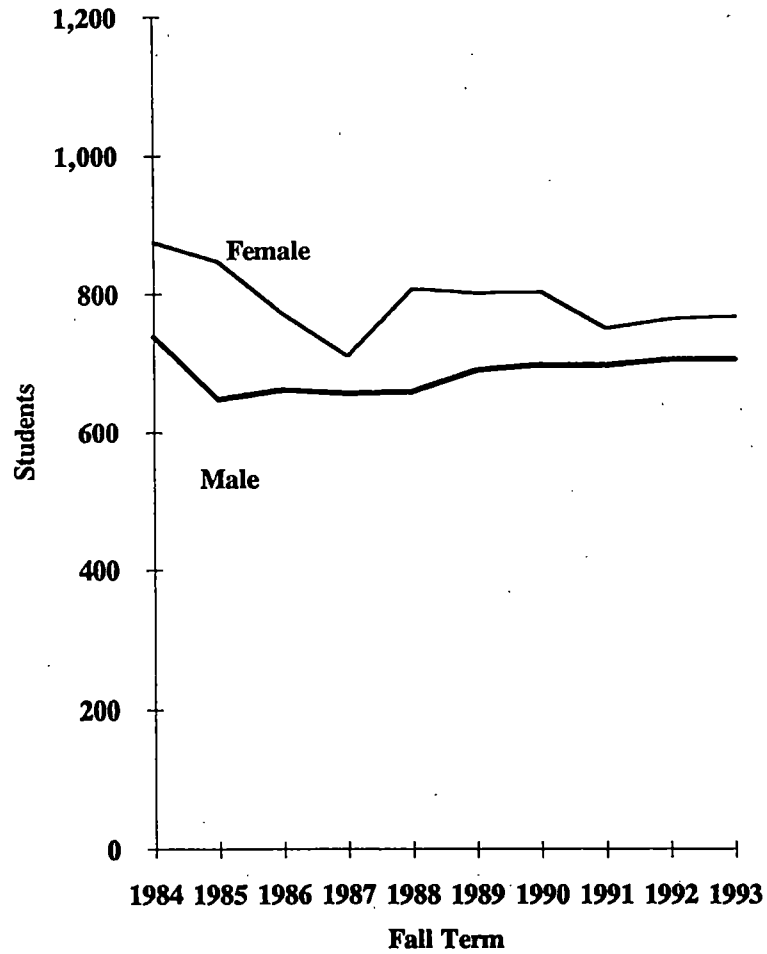


**Percent 18-22 Year Olds in Total Enrollment**

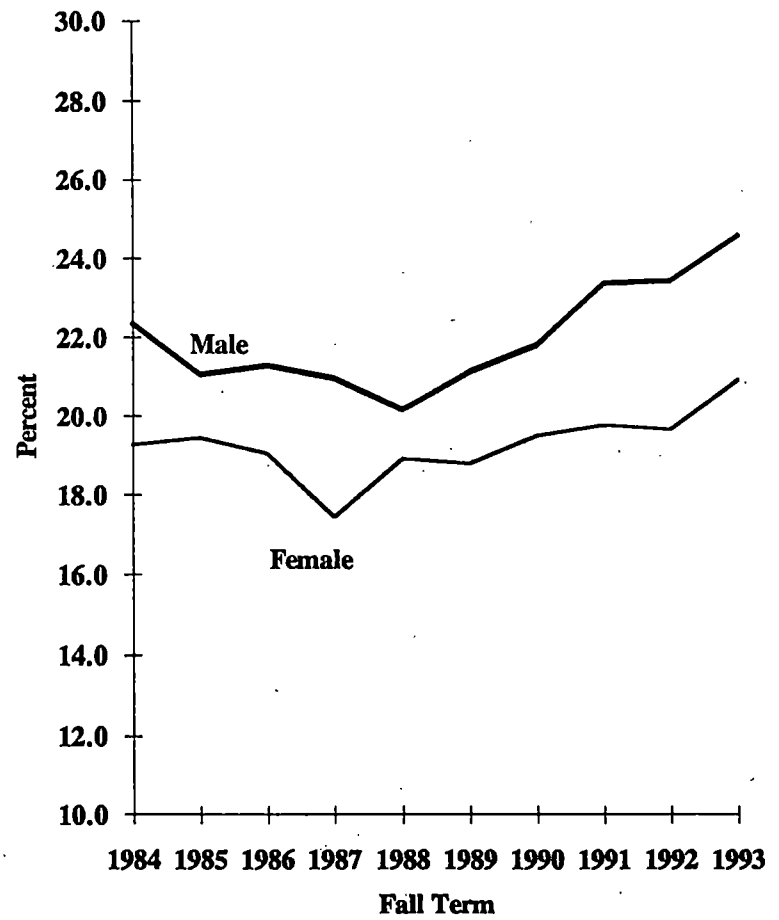


## Orchard Ridge 23-27 Year Old Students

### Trends in 23-27 Year Old Enrollment

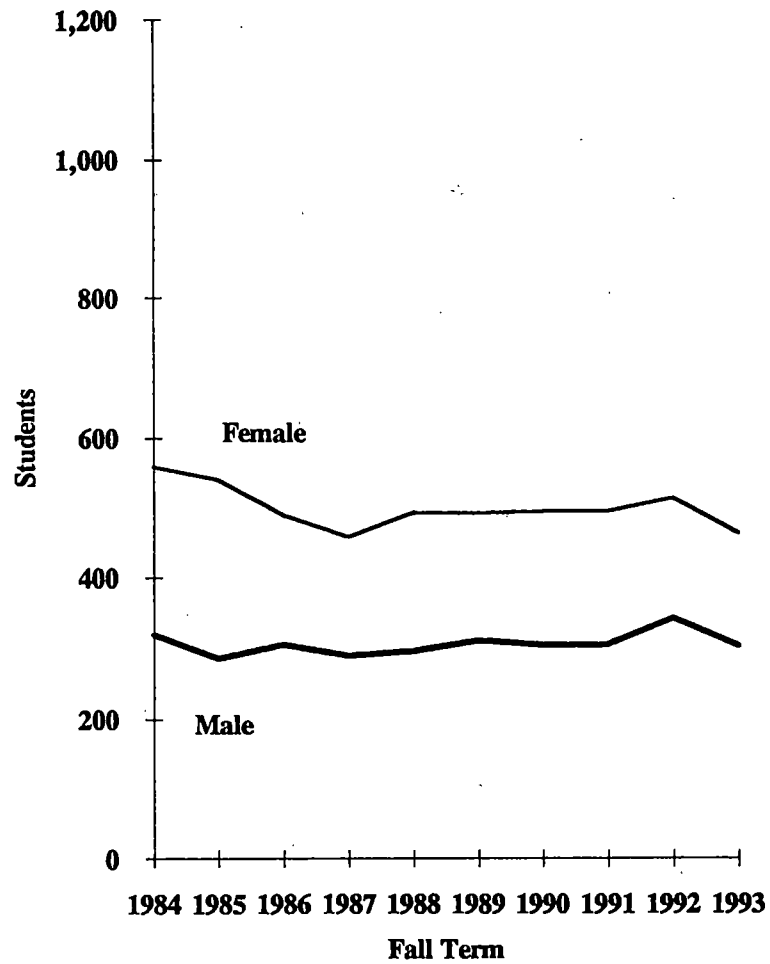


### Percent 23-27 Year Olds in Total Enrollment

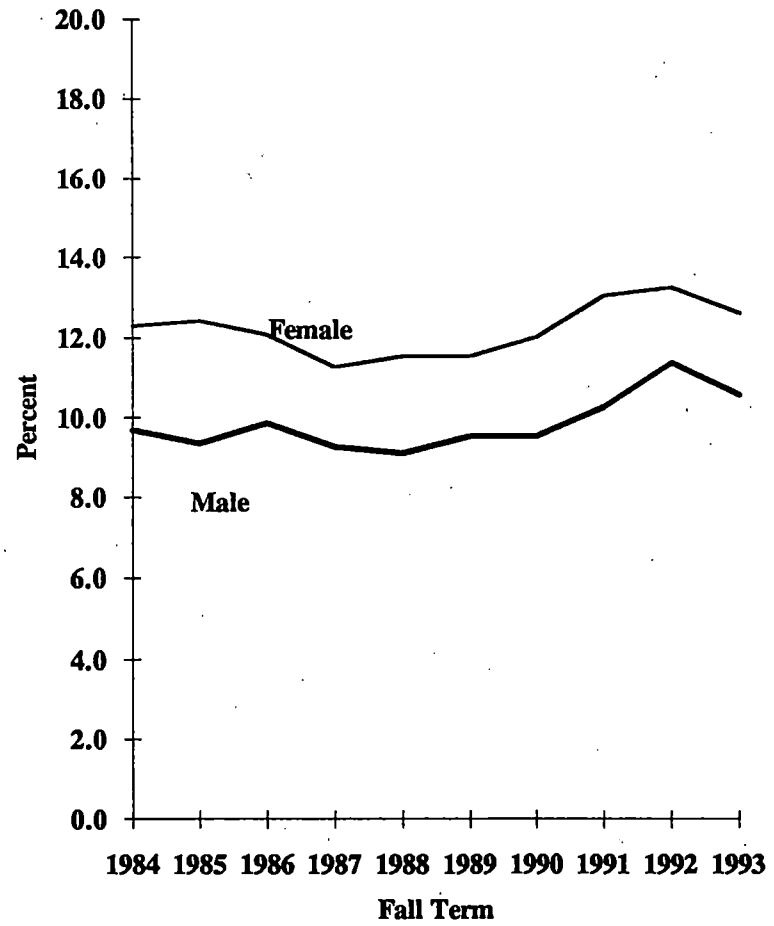


### Orchard Ridge 28-32 Year Old Students

#### Trends in 28-32 Year Old Enrollment

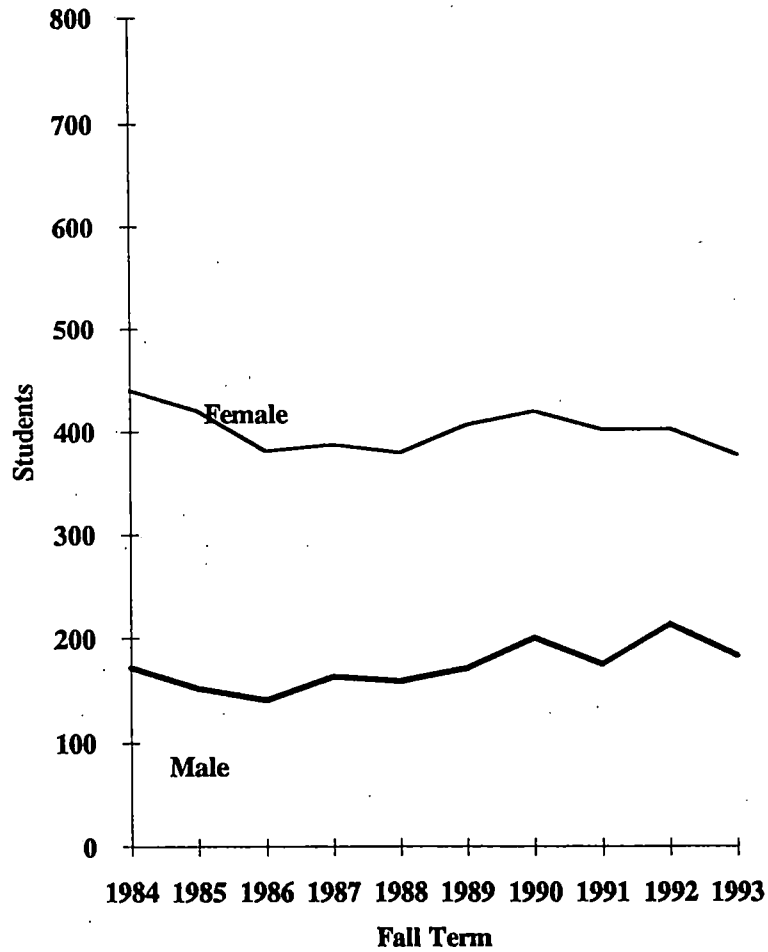


#### Percent 28-32 Year Olds in Total Enrollment



## Orchard Ridge 33-37 Year Old Students

### Trends in 33-37 Year Old Enrollment

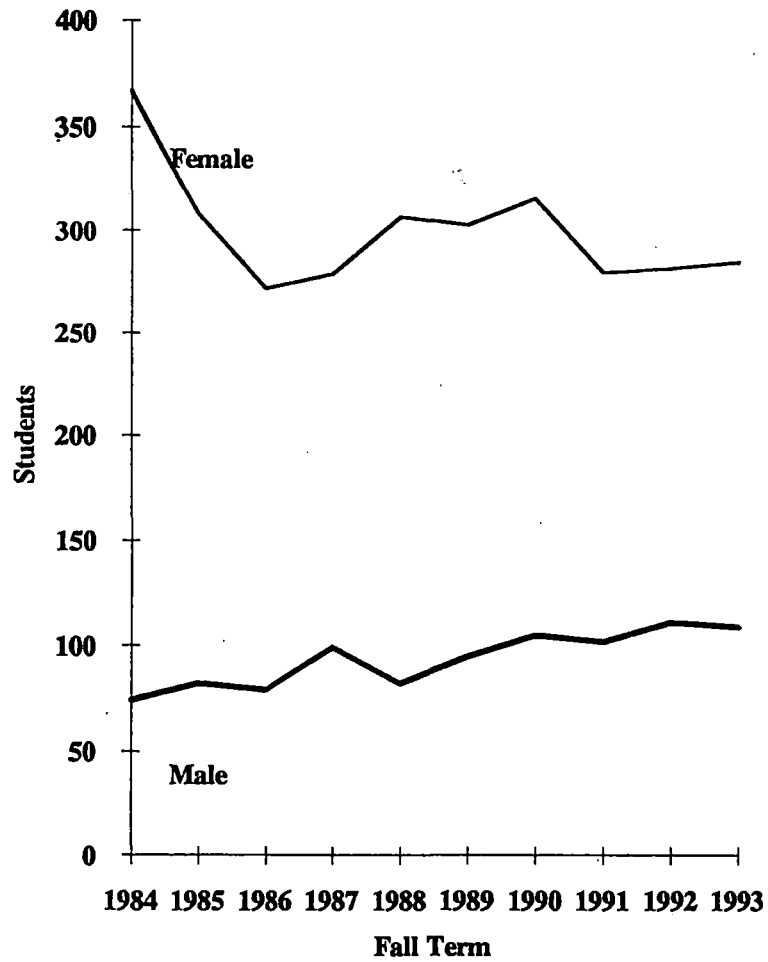


### Percent 33-37 Year Olds in Total Enrollment

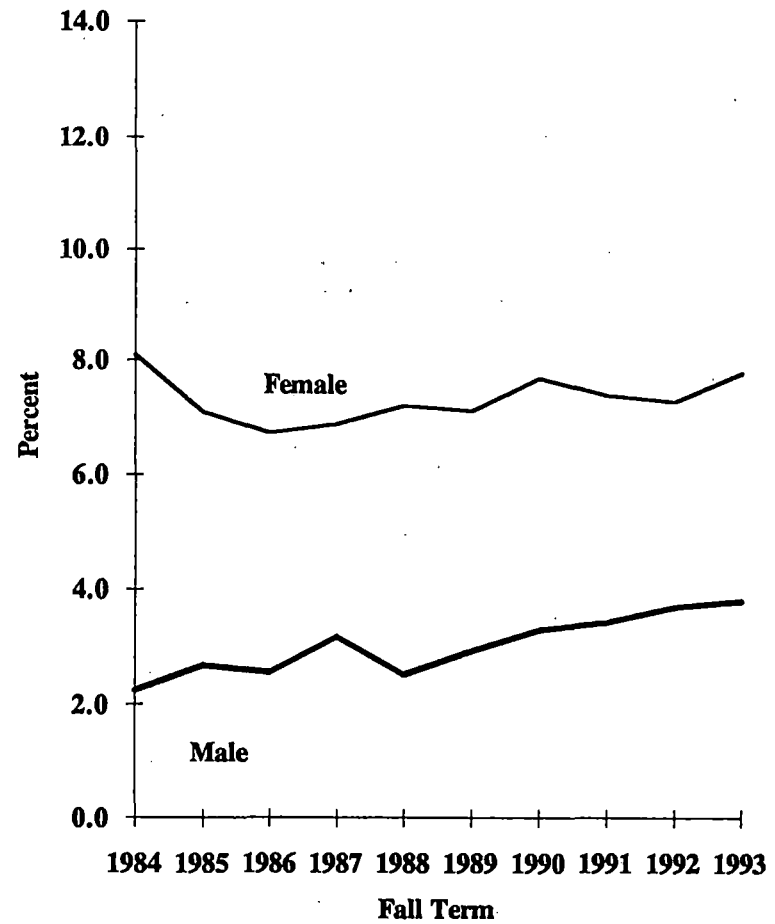


### Orchard Ridge 38-42 Year Old Students

#### Trends in 38-42 Year Old Enrollment

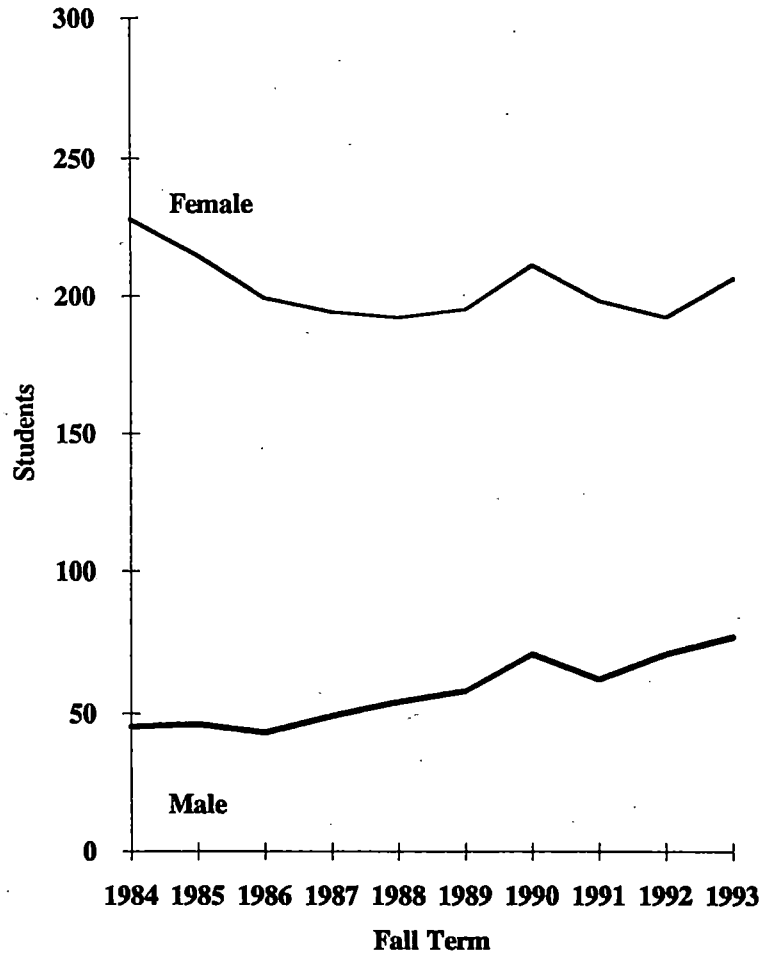


#### Percent 38-42 Year Olds in Total Enrollment

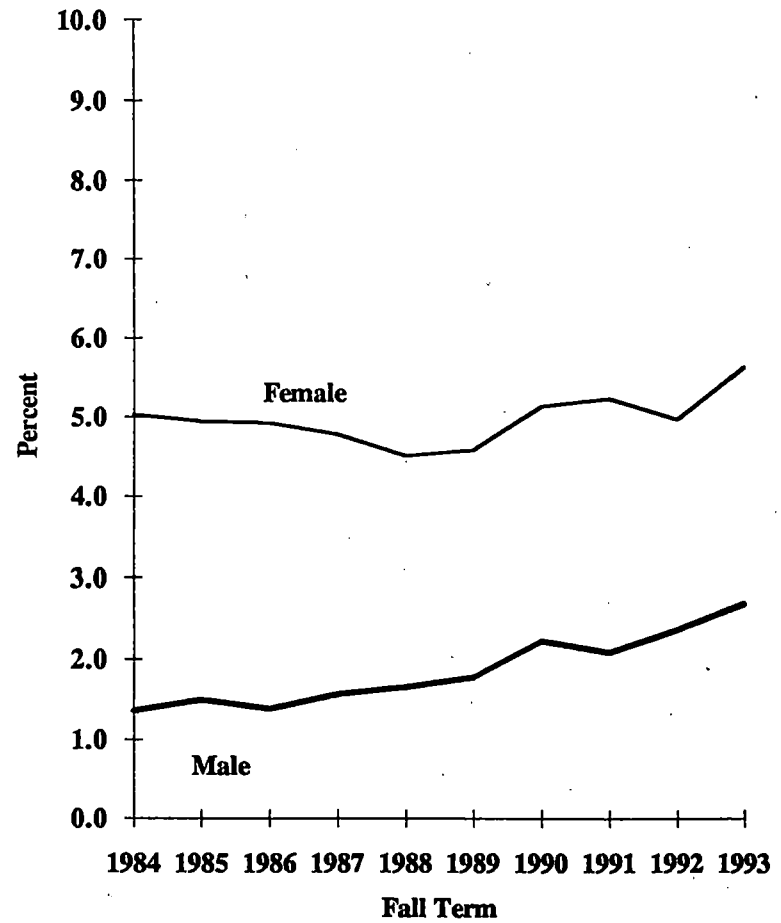


# Orchard Ridge 43-47 Year Old Students

### Trends in 43-47 Year Old Enrollment



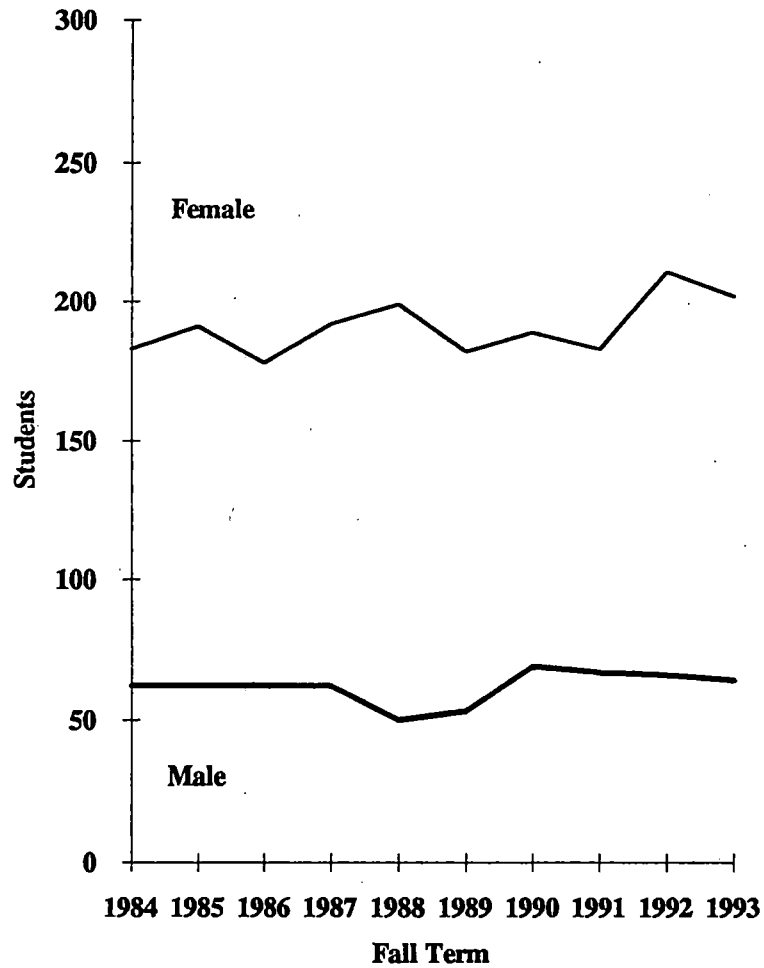
### Percent 43-47 Year Olds in Total Enrollment



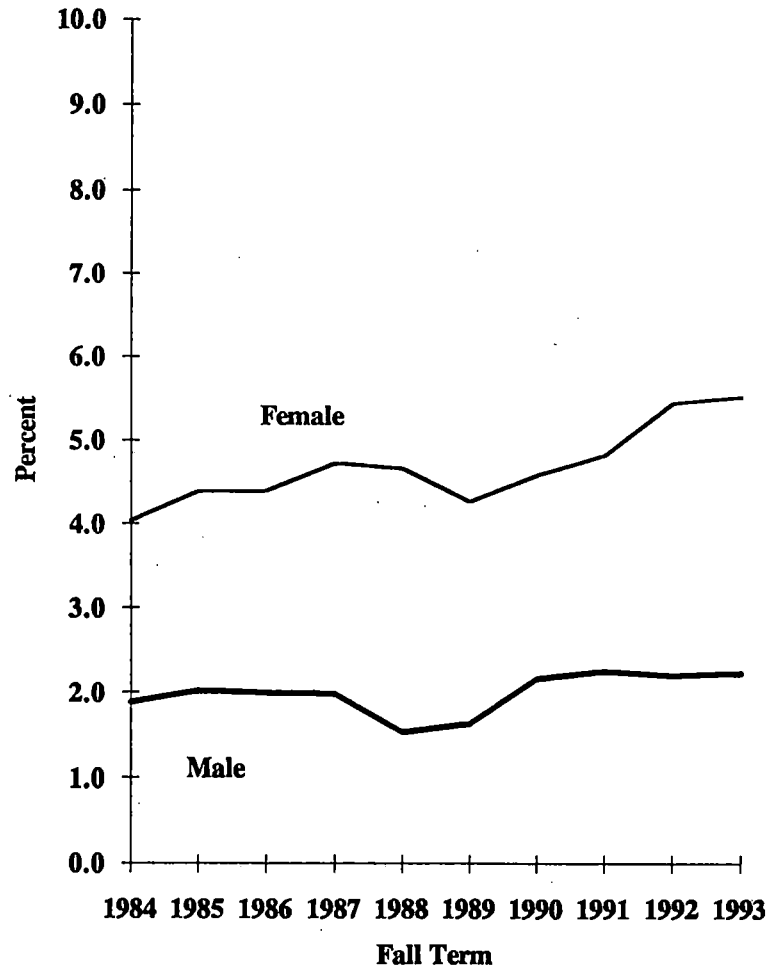


### Orchard Ridge 48 Years & Over Students

#### Trends in 48 & Over Enrollment



#### Percent 48 & Over in Total Enrollment





## Section One: Trends in Student Gender

### Introduction

The purpose of this Section is to determine what factors contributed to the drop in enrollment at Oakland Community College from Fall 1992 to Fall 1993. In the Fall of 1993, the college experienced a 3.0 percent decrease in total student enrollment compared to the Fall 1992 term. However, in the Fall 1992 term, the college recognized a 7.1 percent increase in its total enrollment compared to Fall 1991. There are a number of possible explanations offered for the Fall 1993 decline. However, when student enrollment data is compared over the past five years, there appears to be evidence that this was not a decline at all. In fact, the data suggest exceedingly high Fall 1992 enrollments give the illusion of a decline in Fall 1993.

Over the past five years Oakland Community College has seen a steady 2.6 percent increase in student enrollments. This increase is despite losses at some of its campuses and differing enrollments between gender and age groups (see Section 2). Figure 1, below, represents the ten year trend in fall enrollments. As can be seen from the figure, most campuses have experienced growth over the past five years compared to static enrollment in the preceding years.

Figure 1  
Ten-Year Trend in Total Fall Enrollment

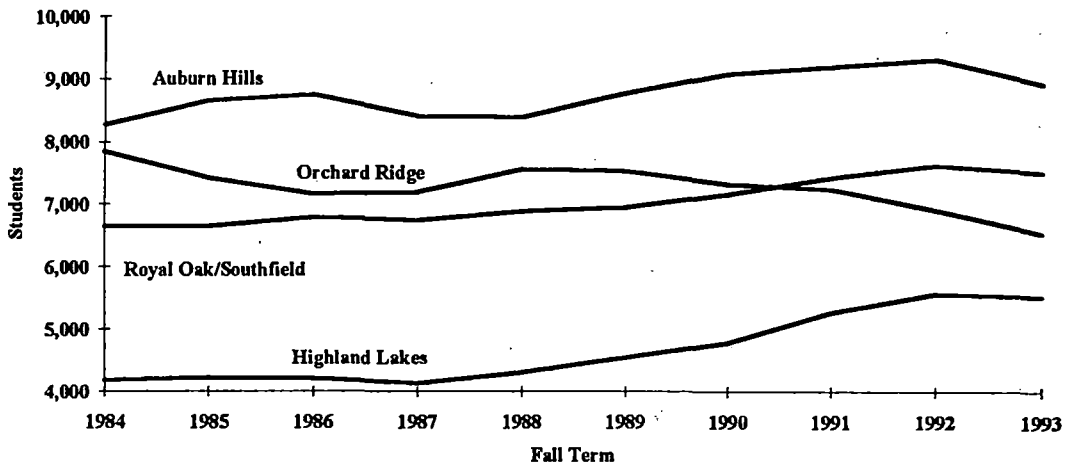


Figure 1 represents a ten year trend in total fall enrollment. As can be seen from the figure most campuses experienced a decrease or leveling-off in total enrollments for the Fall 1993 term.

## Methodology

All trend data will have fluctuations over time. These fluctuations may be inherent variability or aberrations caused by an outside force. Student enrollment measured over time is trend data subject to natural variability and outside forces. To accurately determine if a rise or fall from one year to the next is caused by variability it is important to determine the central tendency of the trend line. The most common measure of central tendency for trend data is the moving mean. This measure is calculated by looking at three year intervals and taking the mean of those intervals. The standard deviation of the moving mean represents the distance from the mean a point must lie to be considered normal variation.

For the purpose of this report the moving mean was calculated by gender for each campus and college-wide total. Fall enrollment data, the moving mean, standard deviation and predicted range are summarized in tables to illustrate student enrollment by gender at each campus and college-wide. To determine the predicted range, the standard deviation is added or subtracted from the moving mean. Values that fall outside of the predicted range are aberrations, unexplained by normal fluctuations. These aberrations may be due to above normal increasing or decreasing enrollment, an exceedingly high enrollment year, or a cause not immediately identifiable.

Following each table is a graphic representation of the data. The solid line drawn on the graph represents the moving mean. Values not falling on the line are fluctuations from the moving mean. If data continually falls above or below the line, this indicates rising or falling enrollments. If the values fall on the moving mean, the population is considered static for that time period.

Note: Some students do not designate their gender and are not included in these tables or graphs. The number of cases is usually small (0-30 missing cases), Fall 1991 has a large number of unknown data (1,691 missing cases).

## Analysis

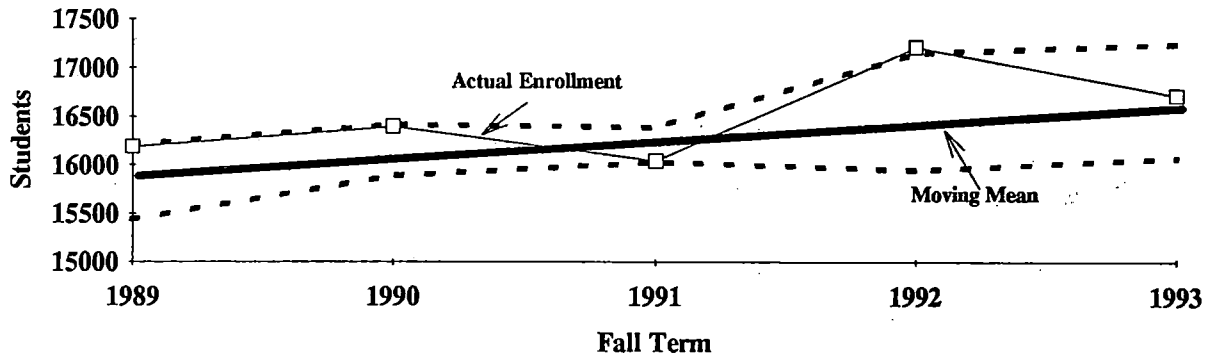
A brief analysis of data, from each campus and college-wide, is given with the graphs and tables. Although a drop in enrollments from Fall 1992 to Fall 1993 is apparent in most data, it is obvious that some populations had higher than expected enrollments in Fall 1992. College-wide data suggest an increase in enrollments of both male and female students over the past five years. Auburn Hills shows fluctuations in male enrollments, which may be due to technology contracts. Highland Lakes has seen an enrollment increase of 20 percent over the last five years. Orchard Ridge has been on a continuous decline for the past four years, losing 13 percent of its total enrollment. At Royal Oak/ Southfield, the number of female students showed a decline in Fall 1993, while the number of male students increased. However in the last five years, Royal Oak/Southfield experienced an 8 percent enrollment increase.

**Trends in Enrollment by Gender  
 College-Wide**

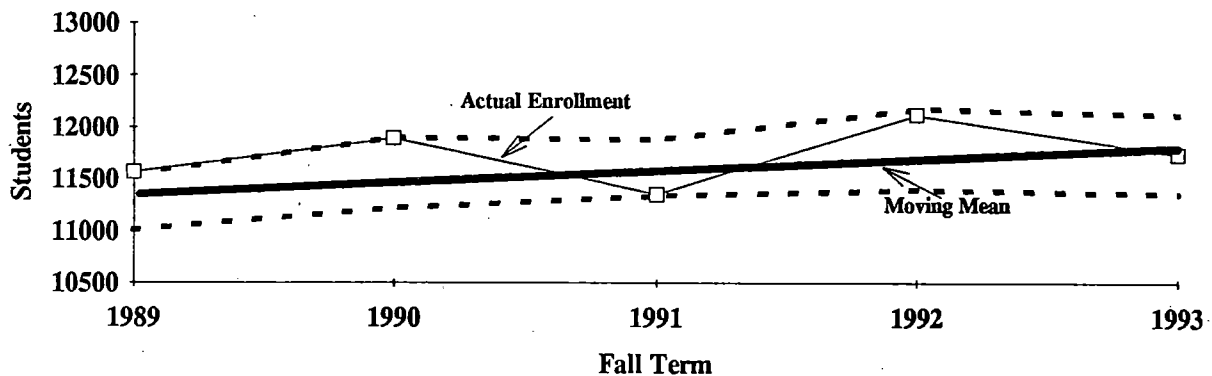
Gender	1989					1990				
	Actual	M. Mean	Std. Dev	Expected Range		Actual	M. Mean	Std. Dev	Expected Range	
Female	16,186	15,824	387.6	16,212	15,436	16,395	16,150	264.0	16,414	15,886
Male	11,568	11,276	266.9	11,543	11,009	11,890	11,557	388.0	11,945	11,169
	1991					1992				
	Actual	M. Mean	Std. Dev	Expected Range		Actual	M. Mean	Std. Dev	Expected Range	
Female	16,042	16,208	177.5	16,386	16,031	17,216	16,551	602.3	17,153	15,949
Male	11,351	11,603	271.2	11,874	11,332	12,117	11,786	393.4	12,179	11,393
	1993									
	Actual	M. Mean	Std. Dev	Expected Range						
Female	16,717	16,658	589.2	17,247	16,069					
Male	11,736	11,735	383.0	12,118	11,352					

Female and male enrollments have been above the moving mean for each year except 1991 (see report for explanation of this year). This indicates an increasing enrollment over the past five years. Female enrollment exceeds the expected range in 1992. The dotted lines in each graph represent the standard deviation from the moving mean.

**Trend in Female Students**



**Trend in Male Students**

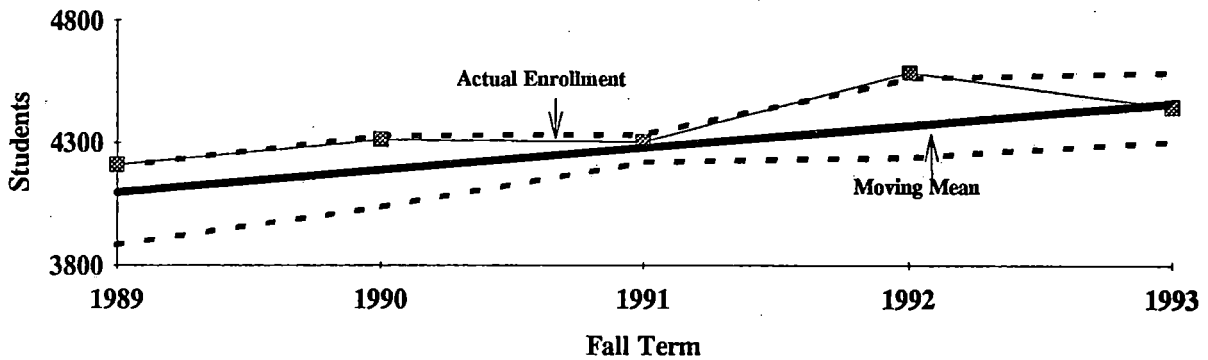


### Trends in Enrollment by Gender Auburn Hills

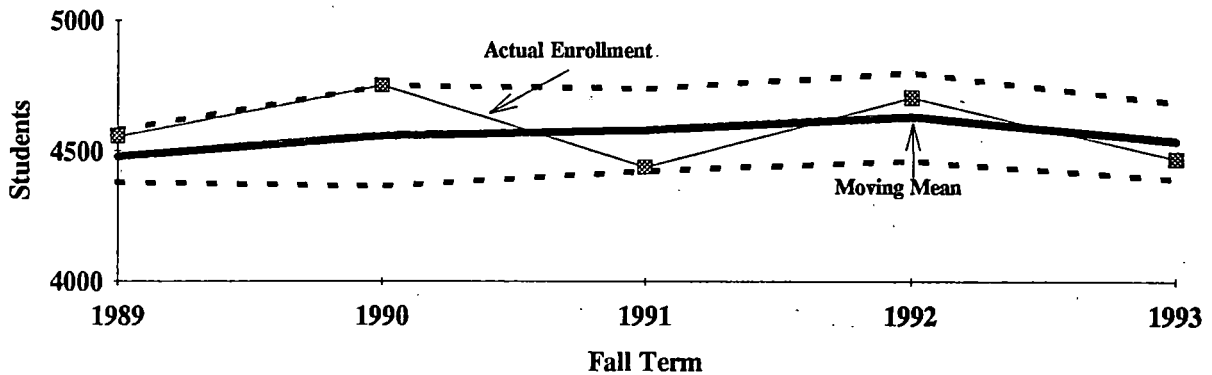
Gender	1989					1990				
	Actual	M. Mean	Std. Dev	Expected Range		Actual	M. Mean	Std. Dev	Expected Range	
Female	4,212	4,044	159.4	4,203	3,885	4,310	4,182	145.3	4,327	4,037
Male	4,555	4,480	99.4	4,579	4,381	4,751	4,558	192.0	4,750	4,366
	1991					1992				
	Actual	M. Mean	Std. Dev	Expected Range		Actual	M. Mean	Std. Dev	Expected Range	
Female	4,304	4,275	54.9	4,330	4,220	4,585	4,400	160.5	4,561	4,240
Male	4,439	4,582	157.7	4,740	4,424	4,707	4,632	168.9	4,801	4,463
	1993									
	Actual	M. Mean	Std. Dev	Expected Range						
Female	4,444	4,444	140.5	4,585	4,304					
Male	4,472	4,539	146.1	4,685	4,393					

For the past five years female enrollment has been on or above the moving mean, indicating a rise in female students. In 1992, female enrollment exceeded the expected range. Male enrollment has fluctuated around the moving mean, which indicates a leveling off or decline in male students. The dotted lines in each graph represent the standard deviation from the moving mean.

Trend in Female Students



Trend in Male Students

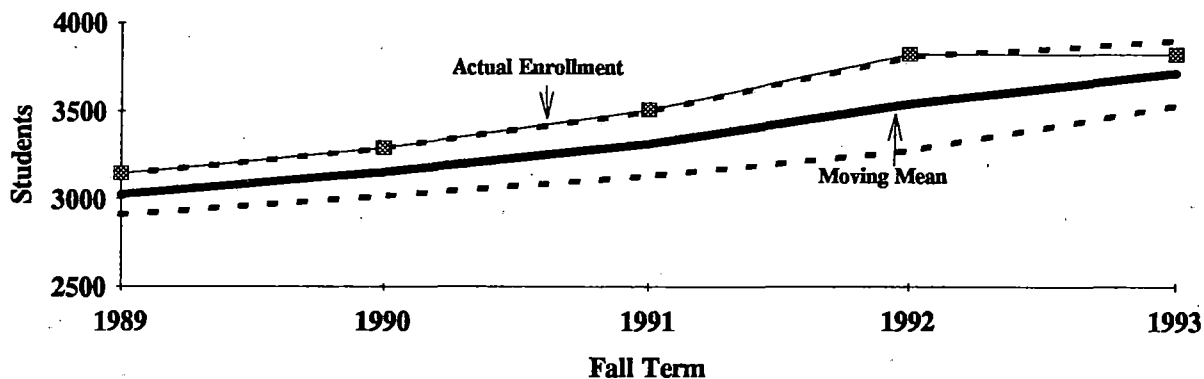


**Trends in Enrollment by Gender  
 Highland Lakes**

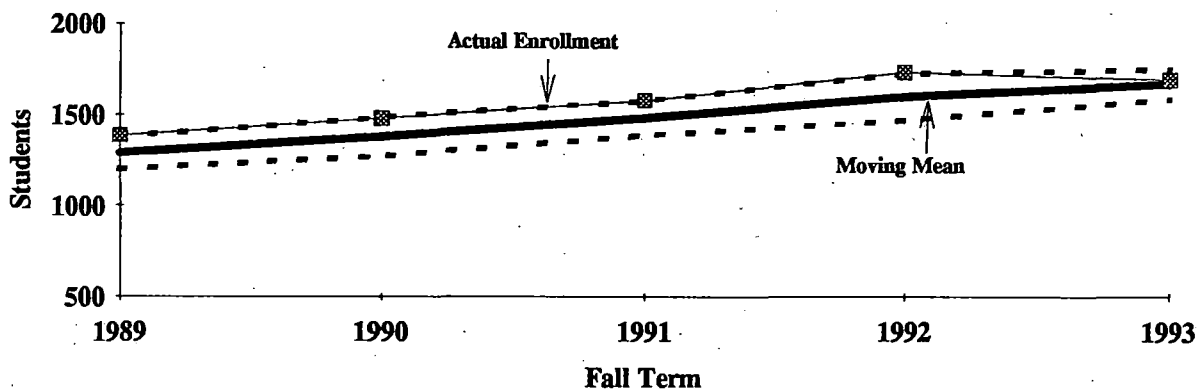
Gender	1989					1990				
	Actual	M. Mean	Std. Dev	Expected Range		Actual	M. Mean	Std. Dev	Expected Range	
Female	3,143	3,024	116.1	3,140	2,908	3,292	3,151	136.7	3,288	3,014
Male	1,387	1,290	88.8	1,379	1,201	1,481	1,379	106.2	1,485	1,273
	1991					1992				
	Actual	M. Mean	Std. Dev	Expected Range		Actual	M. Mean	Std. Dev	Expected Range	
Female	3,505	3,313	181.9	3,495	3,131	3,822	3,540	266.7	3,807	3,273
Male	1,578	1,482	95.5	1,578	1,387	1,732	1,598	127.6	1,726	1,470
	1993									
	Actual	M. Mean	Std. Dev	Expected Range						
Female	3,820	3,716	182.4	3,898	3,534					
Male	1,694	1,669	81.0	1,750	1,588					

Female and male enrollment have been continually above the moving mean and in most years over the expected range. This indicates a strong rise in enrollments of both men and women. The dotted lines in each graph represent the standard deviation from the moving mean.

**Trend in Female Students**



**Trend in Male Students**

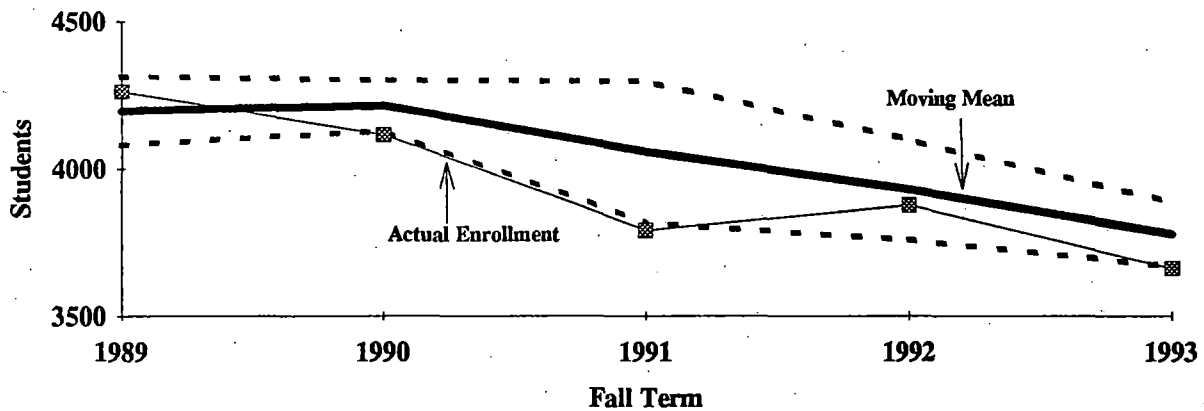


### Trends in Enrollment by Gender Orchard Ridge

Gender	1989					1990				
	Actual	M. Mean	Std. Dev	Expected Range		Actual	M. Mean	Std. Dev	Expected Range	
Female	4,261	4,197	116.1	4,313	4,081	4,116	4,215	85.5	4,301	4,130
Male	3,259	3,217	75.9	3,293	3,141	3,194	3,238	38.4	3,276	3,200
	1991					1992				
	Actual	M. Mean	Std. Dev	Expected Range		Actual	M. Mean	Std. Dev	Expected Range	
Female	3,790	4,056	241.2	4,297	3,815	3,876	3,927	169.0	4,096	3,758
Male	2,676	3,143	148.2	3,291	2,995	3,005	3,058	118.4	3,176	2,940
	1993									
	Actual	M. Mean	Std. Dev	Expected Range						
Female	3,662	3,776	107.7	3,884	3,668					
Male	2,867	2,949	72.8	3,022	2,876					

Female and male enrollments have been consistently below the moving mean for past four years. This represents a decline in both male and female students. Values below the standard deviation indicate an exceedingly high loss of students. The dotted lines in each graph represent the standard deviation from the moving mean.

**Trend in Female Students**



**Trend in Male Students**

