

**Report on the Detroit Area Pre-College Engineering Program (DAPCEP)**  
**as required by**  
**Public Act No. 156 of 2005, Sec. 117**  
**for**  
**2004-2005**

*(The following information about DAPCEP, as well as data from the Detroit Public Schools and national sources, was provided to the Michigan Department of Labor & Economic Growth (DLEG) directly by the DAPCEP staff.)*

**Background**

The Detroit Area Pre-College Engineering Program (DAPCEP) is a pre-college engineering, science and technology initiative in metropolitan Detroit. DAPCEP is dedicated to increasing the number of historically under-represented minority students (African-American, Hispanic-American and Native-American) who are motivated and academically prepared to pursue careers in engineering, science and mathematics-related fields.

According to the 1998/99 Annual Report, DAPCEP was founded with a \$250,000 grant from the Alfred Sloan Foundation in 1976. In its first year of operation (inception) only 250 students were served in three Detroit Public Schools (DPS).

DAPCEP was incorporated in 1983 and since then an 18-person board of directors has governed it. Based on the records provided, DAPCEP has experienced phenomenal growth since inception, reaching 6,000+ students in 2001-2002 by combining the resources of a large and active parent group, schools, colleges and universities, and corporations.

The STATE OF MICHIGAN provided \$340,050 dollars in support of DAPCEP during 2004. In addition to the state support, DAPCEP generated \$3,387,962 in resources through corporate contributions, grants, and in-kind contributions.

DAPCEP operates three programs focused on K-12 students and their teachers:

*In-School:* DAPCEP trains Detroit Public School (DPS) teachers to present the DAPCEP curriculum, which includes Internet training, science fair projects, multi-cultural projects, field trips, corporate and university seminars, mentors and hands-on experiments for Detroit area students. In-school classes are primarily offered in DPS middle and high schools.

*Saturday Enrichment:* Colleges, universities and corporations conduct several diverse programs in the area of mathematics, computer science, engineering, physics, chemistry, and communications skill for students.

*Summer Enrichment:* Several Michigan universities offer on-campus enrichment programs in computer science, mathematics, science, engineering and communications. Each summer students participate in these residential and computer programs. Students in the K-3 or the 4<sup>th</sup> grade summer program are primarily recommended through the 10 partnering DPS schools.

### **Current Status**

The following information is provided in fulfillment of the contract requirement to provide narrative information about DAPCEP as stated on page 5 of the grant agreement (Grant No. 641P5200920) between DLEG and DAPCEP.

#### **a. If entrance to the program is competitive, what are the criteria for enrollment and how are those decisions made?**

In-School Program: Students self-select into these programs. In-School classes are primarily offered in middle and high schools that are part of the Detroit Public Schools (DPS.)

Summer & Saturday Programs: Criteria for application are a 2.0 GPA or above, student interest in science, mathematics, engineering or technology, and a positive teacher recommendation. Students submit an application and school transcript when they apply.

K-3rd Grade: Program participants are primarily recommended through the 10 partnering DPS schools.

#### **b. How are pre-college engineering program students evaluated?**

In-School Program: Students receive a letter grade for the course (A, B, C, D, and E).

Summer & Saturday Programs: Student evaluation is made by DAPCEP course instructors. Subjective evaluation of student interest, completion of homework, participation in class activities, and attendance is recorded. Students who complete the course are given a Certificate of Completion.

#### **c. How do you assess the overall performance of the pre-college engineering program?**

DAPCEP evaluates its overall performance in a number of ways. Some program sites, such as the University of Michigan, Michigan State University, and Michigan Technological University, provide formal evaluations by outside evaluators. Many DAPCEP program sites, however, are not financially able to perform a formal evaluation of DAPCEP programs. Therefore, they provide DAPCEP with internal evaluation results, consisting of student and parent surveys, anecdotal and word-of-mouth evaluations. DAPCEP compiles this information to formulate an overall evaluation of the organization.

#### **d. Provide any anecdotal evidence or quantitative data that documents students' academic achievement.**

Gold Awards Presented at 2005 Science and Engineering Fair of Metropolitan Detroit

<b>Award</b>	<b>Jr. Division</b>	<b>Sr. Division</b>	<b>Total</b>	<b>DAPCEP Actuals</b>	<b>DAPCEP Percentage of Awards</b>
Grand	9	9	18	6	33%
First Place	31	11	42	12	29%
Second Place	51	16	67	35	52%
Third	75	27	102	52	51%
<b>Total</b>	<b>166</b>	<b>63</b>	<b>229</b>	<b>105</b>	<b>46%</b>

#### **e. List all funding sources and the amounts supporting the program.**

The funding sources supporting the program for the period October 1, 2004 through September 30, 2005 include the following:

Corporate Contributions	\$846,757
Grants	
State of Michigan	\$340,050
City of Detroit (NOF)	\$107,359
Detroit Public Schools	\$76,971
In-Kind Contributions	
Detroit Public Schools	\$1,544,317
Other	\$509,149
Interest Income	\$15,066
Other Revenue	\$57,824
<b>Total Revenue</b>	<b>\$3,728,012</b>

**f. Provide a budget narrative for each budget line item.**

Campus and School Based Programs – program salaries, evaluation, instruction, parent and teacher training, family and parent support/mentoring, university costs for programs housed at their respective sites, registration for programs, parent orientation, field trips, job preparation institute, and in-kind expenses.

After-School and In-School Programs: program salaries, teacher training, instructional and science fair materials, student receptions, and in-kind expenses.

Travel: science fair award trip and related field trips.

Administrative: administrative salaries and fringe benefits, office, equipment, and parking rentals, telephone, maintenance for equipment and software, tracking consultant, development consultant, legal and accounting, insurance, public relations, bank charges, and board expense.

**g. Provide information about the number of DAPCEP participants that enrolled in college.**

According to the National Science Foundation, in 1997, 57% of African American and Hispanic high school graduates enrolled in college during the October following high school. Detroit Public Schools data from its 1998 survey of high school graduates lend some insights about the college enrollment of DAPCEP students who graduate from high school. Out of a total of 6,529 surveys sent, 917 respondents returned the survey and answered a question about their participation in special programs, including DAPCEP. Of these 917 respondents, 233 (25%) indicated that they had participated in DAPCEP.

Comparisons between DAPCEP and non-DAPCEP graduates showed that:

- 94% reported they were African American, compared to 92% of non-DAPCEP Graduates.
- 70% reported they were female, compared to 71% of non-DAPCEP graduates.
- Significantly more DAPCEP graduates (94%) reported being enrolled in post-secondary education since graduation compared with their non-DAPCEP counterparts (83%).<sup>2</sup>

This included enrollment in “a college, university, special school or training program.”<sup>3</sup> Eighty-five percent of DAPCEP graduates reported being enrolled in school full time, compared with 75% of non-DAPCEP counterparts.<sup>4</sup> One hundred eighty-seven DAPCEP graduates (80%) reported currently attending a four or five-year college or university.

Recent efforts to obtain information on DAPCEP alumni have confirmed that DAPCEP participation was influential in student’s college enrollment and major selection.

Below is a table with sample results from DAPCEP Alumni Surveys.

ALUM	YEARS IN DAPCEP	PROGRAM PARTICIPATION	DAPCEP INFLUENTIAL TO ATTEND COLLEGE	DAPCEP INFLUENTIAL TO SELECT MAJOR	COLLEGE NAME <sup>(1)</sup>
SC	5	Summer	Yes	Yes	Kettering University
AB	3	All the above	Yes	Yes	Wayne State University
TB	3	In-school	Yes	Yes	Wayne State University
SH	2	Summer & Saturday	Definitely!!! It gave me the drive to excel even after realizing there were not many minorities who had a Math or Science background. It gave me the confidence to understand that this goal was realistically attainable.	Somewhat....I found that I had a passion for solving problems which dealt with mechanical systems.	Michigan State University
HL	6	Summer & Saturday			N. C. A&T State University
SA	1	In-School	I had already decided	Yes. My science project on smoke detectors inspired me to pursue Electrical Engineering	Michigan State University
PA	4	All the above	Yes	No	Northwestern University
CS	1	Saturday	No	No	Florida A&M University
DM	3	In-School & Saturday			University of Detroit Mercy
JK	6	Summer & Saturday	Very much so	Yes	Michigan State University
JH	2	Summer & Saturday	Somewhat, my parent's persistence and insistence was	NO	Central Michigan University

			more influential.		
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<sup>1</sup> National Science Foundation (2000) *Women, Minorities and Persons with Disabilities in Science and Engineering*.

**h. After college graduation, what percentage of DAPCEP graduates obtained employment in the math/engineering/science fields?**

In late 2001, a follow-up Alumni Survey was completed by Moore & Associates. The Alumni Survey had 852 respondents. Although the results were noted to be taken with caution, due to a low response rate, the report indicated that respondents appear to be employed in science, math and/or technology related fields in much higher proportions than the national average.

Survey respondents were individuals who participated in DAPCEP between the program years of 1978 and 2001. Of those who responded, 90% indicated that they attended, are currently attending or have been accepted at a college or university. When asked if their major was math or science related, 63% of males and 60% of females responded positively. A total of 308 (36%) of the survey respondents provided information regarding employment. Of those who clearly reported their position titles, 90 (82%) of the males and 116 (59%) of the females were working in math, science, engineering, or technology related positions.

DAPCEP continues to update its alumni database. Alumni are being asked to submit data pertaining to college and work history. The following table is a sample of the DAPCEP Alumni Responses:

ALUM	YEARS IN DAPCEP	PROGRAM PARTICIPATION	EMPLOYER	HS NAME	COLLEGE NAME <sup>(1)</sup>
SC	5	Summer	Blue Cross Blue Shield	Cass Technical H.S.	Kettering University
AB	3	All the above	Hutzel Hospital	Mercy High School	Wayne State University
TB	3	In-School	College Student	Thomas M. Cooley	Wayne State University
SH	2	Summer & Saturday	College Student	Cass Technical High School	Michigan State University
HL	6	Summer & Saturday	DaimlerChrysler	University of Detroit Jesuit	N. C. A&T State University
SA	1	In-School	DaimlerChrysler	Cass Technical High School	Michigan State University
PA	4	All the above	Pfizer Inc	Cass Technical High School	Northwestern University

CS	1	Saturday	City Connect Detroit	Detroit High School for the Fine & Performing Arts	Florida A&M University
DM	3	In-School & Saturday	DTE Energy	Cass Tech	University of Detroit Mercy
JK	6	Summer & Saturday	Graduating from college 5-7-05	Southfield High School	Michigan State University
JH	2	Summer & Saturday	DTE Energy	Renaissance High School	Central Michigan University

<sup>2</sup> Chi-square = 17.05,  $p < .000$ , df 1,895

<sup>3</sup> Question #17 on Detroit Public School Graduate Survey

<sup>4</sup> This difference is statistically significant: Chi-square = 9.78,  $p < .002$ , df 1, 770

**i. Provide information on the participants: schools, postsecondary institutions and business partners.**

DAPCEP partners with many organizations to provide academic enrichment programming. Following is a summary of Detroit Public Schools, Postsecondary Institutions, and Business Partners involved in our programming.

DPS Schools (In-School Program)

Please see the attached list of In-School Program Sites.

Postsecondary Institutions (Saturday and Summer Programs)

University of Detroit Mercy, Wayne State University, Lawrence Technological University, Oakland University, University of Michigan – Dearborn, University of Michigan – Ann Arbor, Michigan State University, Michigan Technological University,

Business Partners (Saturday and Summer Programs)

General Motors, Ford Motor Company, Tabernacle Missionary Baptist Church, Hartford Memorial Baptist Church, Exam Experts Learning Academy, EDS Engineering and Management Services

**2. Statistical Information**

Results below are organized according to the statistical information requests included in the DLEG/DAPCEP contract, page 6.

**a. Provide a comparison by classification of dropout rates for DAPCEP students against the general population of Detroit Public Schools.**

Over the past four years the Detroit Public Schools dropout rate has been:

Year Dropout Rate

1999-2000 10.57%

2000-2001 12.21%

2001-2002 10.59%

2002-2003 14.89%<sup>5</sup>

Source: Detroit Public Schools, Research Office and State of Michigan Center for Educational Performance and Information (<http://www.michigan.gov/cepi>)

Sufficient data is not currently available to calculate the high school dropout rate for DPS students for the 2004-2005 academic year. A survey conducted in 1998 showed a high school dropout rate of DAPCEP students of 2%.

**b. Provide a comparison by classification of Grade Point Averages (GPAs) of all subjects for DAPCEP students, against the general population of Detroit Public Schools.**

GPA data on Detroit Public Schools was not available for the 2004-2005 academic year.

**c. What percentage of DAPCEP graduates enrolled in a college program specific to math, science, and engineering compared to the national average of non-DAPCEP students enrolled in the same field?**

According to the National Science Foundation, in 1998, 33% of White, African American, Hispanic and American Indian freshmen intended to major in science and engineering. As reported earlier, The Alumni Survey conducted by Moore & Associates reports that of those surveyed that had reported going to college, 63% of males and 60% of females were in a math or science programs such as Biology, Chemistry, Engineering (computer, electrical, mechanical), and Pre-Med. These results will be validated in a future survey.

Please refer to the table in section **1-h** of this report for sample employment information on current DAPCEP alumnus who volunteered their employment information to DAPCEP.

<sup>5</sup> Estimated 2002-2003 dropout rates for the Detroit Public Schools are currently being disputed by the Detroit Public Schools.

**Summary**

DAPCEP students are selected based on academic achievement, interest in SMET, and teacher recommendation. DAPCEP In-School students are not selected based on academic criteria. Except for the In-School program, DAPCEP student achievement is only consistently assessed through certificates of completion. The evaluation team is working with DAPCEP to implement a comprehensive evaluation plan that will include more objective assessment of student outcomes. Limited information available on DAPCEP graduates shows more of them to be employed in SMET fields than national averages. More DAPCEP graduates appear to enroll in college than the national average.

<b>Program</b>	<b>Population</b>	<b>%</b>
K-3	240	6%
In-School	1290	32%
Saturday/Summer	2549	60%
<b>Total Enrollment</b>	<b>4079</b>	



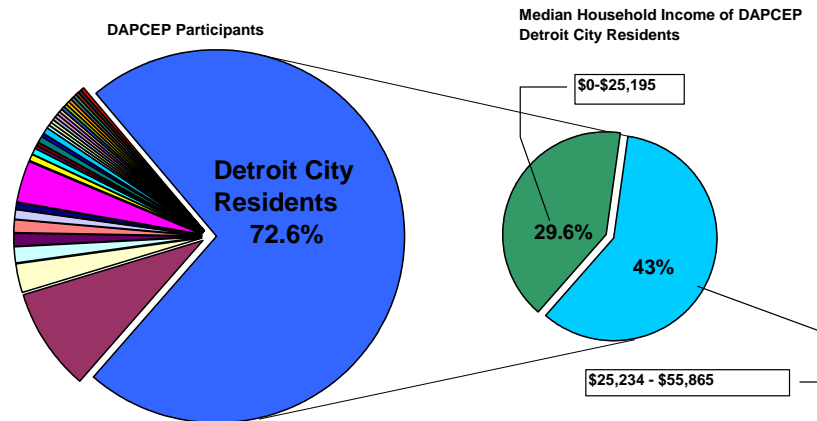
**In-School Program Sites**

High Schools and Middle  
Schools  
Cass Tech  
Academy of the Americas  
Central  
Bates  
Clippert  
Northwestern  
Columbus  
Osborn  
Courtis  
Redford  
Drew  
Renaissance  
DSMAT  
Southeastern  
Duffield

CMA  
Bethune Academy  
Denby  
Blackwell  
DSA  
Boynton  
Finney  
Southwestern  
Emerson  
Golightly  
Grant  
Hally  
Henderson Upper  
Hutchins  
Lessenger  
Longfellow  
Ludington  
Maya Angelou

Brenda Scott  
King  
Butzel  
Mackenzie  
Mumford  
Cervený  
Murray Wright  
Post  
Robeson  
Sherrill  
Spain  
Taft  
University Public @ Pelham  
Vetal  
Webber  
Winship

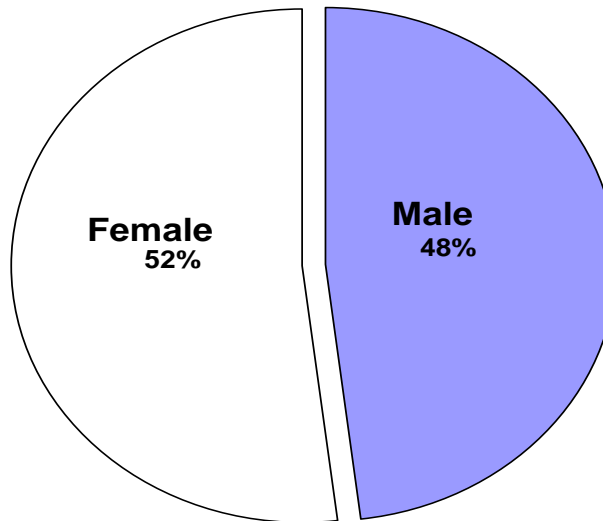
**DAPCEP Participants by City with Median Household Income Breakout for Detroit City Residents**



29.6% of all DAPCEP students fall below the 2004 US Census Poverty Threshold for Median Household Income of \$25,241<sup>1</sup>.

<sup>1</sup> Data obtained by correlating US Census Median Household data for City of Detroit with 2004 Fall DAPCEP registration rosters.

**DAPCEP Student Population by Gender  
based on Fall 2004 Student Enrollment**



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**Background**

The Grand Rapids Area Pre-College Engineering Program (GRAPCEP) began in September 1997. It is a regional pre-college engineering program operated by Davenport University at Grand Rapids in partnership with the Grand Rapids Public Schools (GRPS.) The program is intended to meet the need for well-trained engineers and scientists for growing businesses of West Michigan and to increase the number of historically under-represented populations in these career fields. GRAPCEP achieves its mission by forming working partnerships with area schools, businesses and institutions of higher education. Together, these partners work to enhance the teaching and learning of mathematics and science in the target schools in order to enable students to develop the mathematical, scientific, and personal skills needed to succeed in science and engineering careers.

To become participants in the GRAPCEP program students go through a three-phase selection process – application, teacher recommendation, and personal interview. Acceptance criteria include having a 2.60 or better grade point average (GPA), achieving high scores in social and work habits during the last grade marking period, obtaining positive recommendations from two teachers, and successfully completing an individual interview conducted by a team of at least two GRAPCEP staff and teachers. The interview mirrors a job interview.

GRAPCEP operates three programs focused on middle and high school students and their teachers – In-School, Saturday Enrichment, and Summer Enrichment.

In addition to the above academic services GRAPCEP provides students with career development services that involved company tours, job shadowing, internships, and career fairs.

**Current Status**

**Comparisons made to the General Population of the Grand Rapids Public Schools (GRPS) for Most Recent Academic Year with Comparative Data 2004 – 2005**

GRAPCEP serves over 3,000 students who participate in GRAPCEP sponsored competitions (Mathfax, FIRST Robotics, Rocketry, National Engineers Week Competitions, etc.) and career activities in classrooms or career fairs. In addition, GRAPCEP staff work with 71 teachers in GRPS and from districts throughout the state, offering them numerous professional development workshops and opportunities. The new teaching strategies the GRAPCEP teachers implement have positive effects on the learning of hundreds of students. GRAPCEP works very closely with a core group of students that participate significantly in GRAPCEP activities (over 50 contact hours). For 2004-05, the total number of students in the GRAPCEP core group is 288 individuals. High school students in this core group are tracked throughout high school, college, and two years into the workforce.

**For the academic year 2004-2005, the core group of students in the GRAPCEP program persisted in school at a rate of 99.99% (with one student dropping out of high school without graduating resulting in a 0.0036% dropout rate; and a 99.99 % retention rate).** For the academic year 2004-05, the total number of the GRAPCEP core group is 288 students: 46 were 10<sup>th</sup> graders, 42 were 11<sup>th</sup> graders, 56 were 12<sup>th</sup> graders, and 144 graduated from high school in June 2001, 2002, June 2003 (with one

student did not graduate from high school), and June 2004. The students in the GRAPCEP core group completed at least one active year of participation in the GRAPCEP program.

GRPS does not currently track graduation or dropout rates for students in GRPS high schools. Nonetheless, many administrators in the GRPS District say that the high school drop out rate is high for the general population in their schools. None of the administrators consulted for this report thought that any of the GRPS high schools approaches the 99.99% persistence rate of the core group within GRAPCEP.

***A. Provide a comparison by classification of Grade Point Averages of all subjects for GRAPCEP, against the general population of the Grand Rapids Public Schools (GRPS).***

**Chart 1** that follows illustrates the significant positive comparison by classification of the GRAPCEP core group's GPA to the general population of GRPS. (Note that NA on this chart indicates that no students of that population are enrolled in GRAPCEP). **Chart 2** also indicates the number of students in each of the populations compared and the percentage of students within each group.

**The overall 2004-05 GPA's for the GRAPCEP students compare positively to the general GRPS population by grades level, for grades 10-12.** The overall GPA for GRAPCEP 10<sup>th</sup> graders is 3.38 as compared to 2.69 for all GRPS 10<sup>th</sup> graders. The overall GPA for GRAPCEP 11<sup>th</sup> graders is 3.18 as compared to 2.21 for all GRPS 11<sup>th</sup> graders. The overall GPA for GRAPCEP 12<sup>th</sup> graders is 3.5 as compared to 2.24 for all GRPS 12<sup>th</sup> graders. **The combined GPA for all GRAPCEP students in grades 10-12 is 3.35 as compared to the combined GPA for all GRPS students in grades 10-12 of 2.38.**

The comparison of GPA's by grade and classification is further illustrated with bar graphs that follow, **Graphs 1, 2, and 3**. These bar graphs do not include illustration of populations where comparison is not available (either GRAPCEP does not have any students in that population or GRPS does not have a comparable group). **Graph 4** illustrates the combined GPA's by ethnicity for all grades (10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup>).

***B. Provide a comparison by classification of GRAPCEP student graduates who are now enrolled in college science/engineering/math-based curricula, against National Averages for non-PCEP student enrollments in the same field of study.***

The GRPS School District is a disadvantaged district with more than 75% of students receiving free or subsidized lunches (2004-05 data). The GRPS District does not track their graduates to see how many enroll in college, but national data on poverty indicates that students from poverty backgrounds are less likely to enroll in college after high school graduation, and are 13 times less likely to earn a college degree than wealthy students. (National Action Council for Minorities in Engineering, 1997 Annual Report).

In addition, the GRPS School District's enrollment includes 74% of students from ethnic minorities (2004-05 data). "Every year, across the country, a dangerously high percentage of students—disproportionately poor and minority—disappear from the educational pipeline before graduating from high school. Nationally, only about 68 percent of all students who enter 9th grade will graduate 'on time' with regular diplomas in 12th grade. While the graduation rate for white students is 75 percent, only approximately half of Black, Hispanic, and Native American students earn regular diplomas alongside their classmates." (Orfield, G., Losen, D., Wald, J., & Swanson, C. (2004). "Losing our future: how minority youth are being left behind by the graduation rate crisis.")

For the GRAPCEP high school graduates, the combined graduating classes of June 2001, 2002, 2003, 2004 and 2005 total 200 students. **Based on self-declared survey information as of fall 2005, 153 GRAPCEP high school graduates are enrolled in college or 76.5%. Of the 153 GRAPCEP students who indicated enrollment in college, 91 students or 59.5% are currently enrolled in science, math or**

engineering programs. The **high percentage of GRAPCEP students enrolled in engineering and science programs compares very favorably with the 20% of all students who took the ACT test** in 2001 and indicated an interest in entering college programs in engineering, science or mathematics. **Graphs 5** based on ACT (College Board) data illustrate this positive comparison of GRAPCEP students' choices to enroll in college SME programs (59.5%) over the general college population (20% as indicated on ACT tests as intended majors). **Graphs 6, 6.1, 6.2, 6.3 and 6.4** illustrate the GRAPCEP students' college major for the high school classes of 2001, 2002, 2003, 2004, and 2005. **Graph 7** illustrates the composite college majors for all GRAPCEP students enrolled in college.

The attached **Chart 3** indicates the specific **colleges and major for the 153 GRAPCEP high school graduates who are currently enrolled in college**. It is clear that the GRAPCEP students in SME chose majors reflecting the extensive exposure to careers in those fields given by GRAPCEP. The internships and co-ops arranged by GRAPCEP greatly influenced those students participating in them.

***C. Provide a comparison by classification of GRAPCEP student graduates who are employed in science, engineering, and math-based fields.***

Since GRAPCEP will be in operations for 8 years old as of January 2006, **most of our oldest students (who were originally chosen following 9<sup>th</sup> grade in high school) are currently seniors (fifth year) in college**, and this question can only be answered for the students who confirmed graduation in 4 years. Two GRAPCEP students graduated from college in 4 years (May 2005). One of those students completed an internship with the National Cancer Society this past year following her graduation from Michigan Technological Institute with a BS in Bioinformatics and will enrolled in a PhD program in biology (research science) in the fall of 2006. Another of those students graduated from Michigan State University with a BS in Biology (pre-medicine) and entered medical school at Ohio State University in the fall of 2005. Both students are females and ethnic minorities. The GRAPCEP staff members anticipate that most of the GRAPCEP students who graduated from high school in 2001 will graduate from college in 5 years (by May 2006).



# Chart 1

GRAPCEP

GRPS

	12	11	10	9	8	12th	11th	10th	9th	8th
Caucasian Male	3.31	3.15	3.50	NA	NA	2.47	2.60	2.16	2.15	2.61
Caucasian Female	3.56	3.60	3.75	NA	NA	2.94	2.20	2.49	2.35	2.89
AfAm Male	2.96	2.87	2.92	3.40	3.44	2.23	1.77	1.83	1.48	2.08
AfAm Female	3.06	3.16	3.32	3.40	2.46	2.59	2.06	2.01	1.79	2.44
Hisp Male	3.51	3.18	3.82	NA	4.00	2.09	1.96	1.88	1.57	2.14
Hisp Female	3.36	3.05	NA	NA	3.90	2.42	2.32	2.13	1.74	2.39
Asian Male	NA	NA	3.73	NA	NA	3.44	2.49	2.10	2.35	2.90
Asian Female	3.57	NA	NA	NA	NA	2.87	2.80	3.10	3.11	2.82
Am-Ind Male	NA	NA	NA	NA	NA	2.77	1.89	2.50	1.92	2.44
Am-Ind Female	NA	NA	NA	Na	NA	3.04	1.98	2.23	1.42	2.46

# Chart 2

## GRAPCEP

Exp. Graduation Yr	12th 2004	11th 2005	10th 2006	9th 2007	8th 2008	Total	Percent	GPA
Caucasian Male	9	13	11	0	0	33	20.8%	3.31
Caucasian Female	12	13	9	0	0	34	21.4%	3.62
AfAm Male	5	8	5	8	5	26	16.4%	3.72
AfAm Female	11	14	11	8	7	44	27.7%	3.80
Hisp Male	3	5	3	0	1	11	6.9%	3.81
Hisp Female	4	2	0	0	1	6	3.8%	3.91
Asian Male	0	1	3	0	0	4	2.5%	3.73
Asian Female	1	0	0	0	0	1	0.6%	3.42
Am-Ind Male	0	0	0	0	0	0	0.0%	0.00
Am-Ind Female	0	0	0	0	0	0	0.0%	0.00
Total	45	56	42	16	14	159	100.0%	3.41
GPA	3.30	3.22	3.48	3.42	3.61			

## GRPS

	12th	11th	10th	9th	8th	Total	Percent	GPA
Caucasian Male	177	427	310	338	272	1524	20.6%	2.12
Caucasian Female	180	346	265	334	239	1364	18.4%	2.51
AfAm Male	177	317	383	441	36	1354	18.3%	1.83
AfAm Female	180	343	363	435	319	1640	22.1%	2.11
Hisp Male	29	100	111	231	149	620	8.4%	1.85
Hisp Female	54	93	117	198	177	639	8.6%	2.13
Asian Male	7	28	20	15	12	82	1.1%	2.51
Asian Female	11	21	15	23	13	83	1.1%	2.82
Am-Ind Male	2	17	8	18	9	54	0.7%	2.11
Am-Ind Female	3	8	17	8	14	50	0.7%	2.17
Total	820	1700	1609	2041	1240	7410	100.0%	2.22
	2.51	1.93	2.08	1.85	2.41			



### Chart 3

#### College and Program Choices of GRAPCEP Graduates 2001, 2002, 2003 & 2004

Name of College	2001	2002	2003	2004	Total
Aquinas College	0	1	0	1	2
Calvin College	0	1	1	0	2
Central Michigan U	0	1	0	1	2
Cornerstone U	0	0	0	1	1
Eastern Michigan	0	0	0	1	1
Ferris State U	0	1	4	2	7
Grand Valley State U	4	3	9	6	22
Grand Rapids CC	5	1	18	11	35
JSU, Miss	0	0	2	1	3
Hope College	1	0	1	0	2
Howard U	0	1	0	0	1
Kettering U	0	1	3	1	5
Messiah. PA	0	0	1	0	1
Michigan State U	1	4	6	0	11
Michigan Tech U	1	0	1	1	3
Olivet	0	1	0	0	1
Northern Michigan	0	0	0	1	1
North Park U	0	2	0	0	2
Tennessee State U	2	0	0	1	3
University of Ill- Champaigne	0	0	0	1	1
University of Michigan	1	3	0	0	4
Wayne State	0	0	1	0	1
Western Michigan U	2	0	2	5	9
Westwood College	0	0	0	1	1
<b>TOTAL</b>	17	20	49	35	121

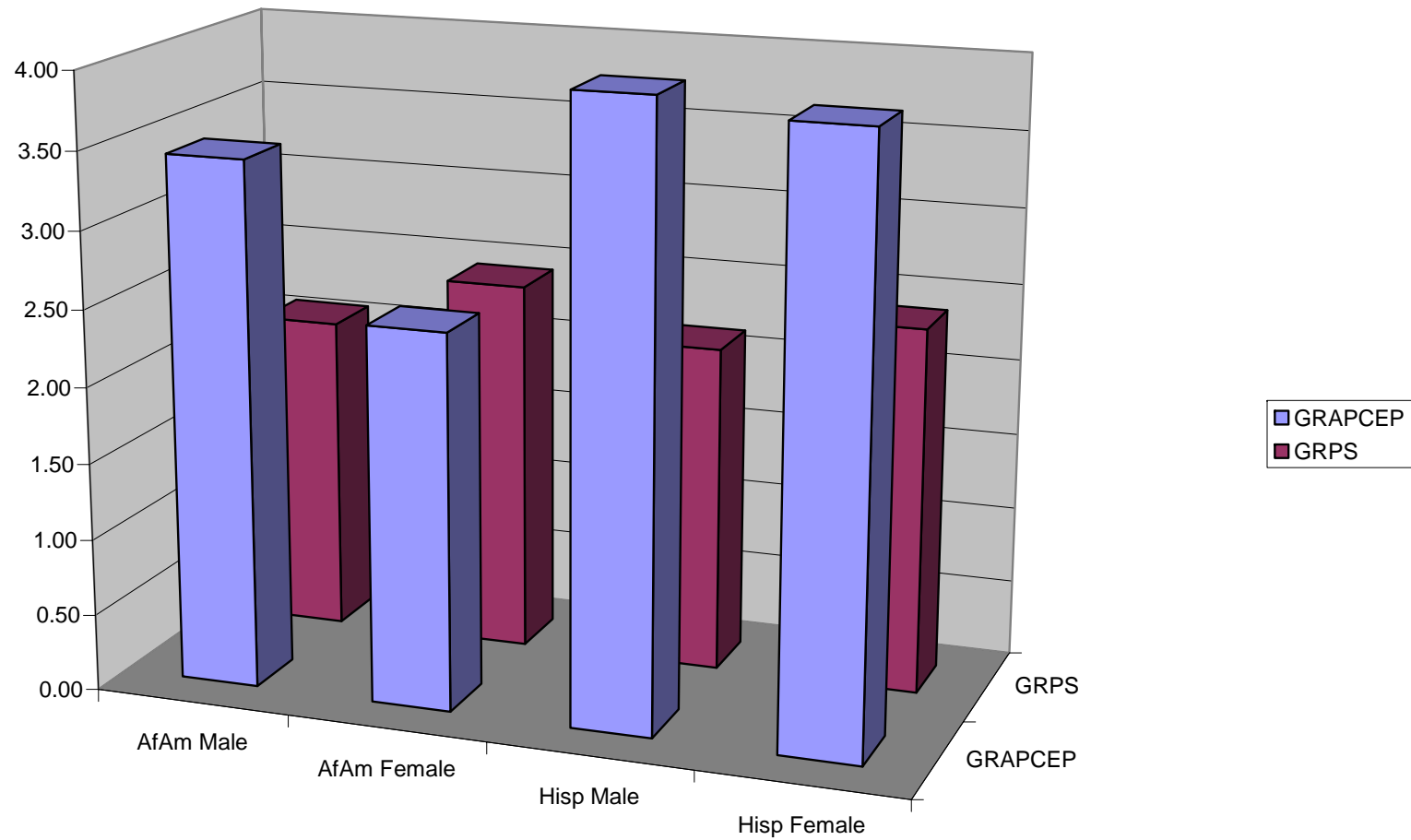
#### Engineering Majors

Aerospace
Architechural
Chemical
Computer Science
Electrical
Mechanical

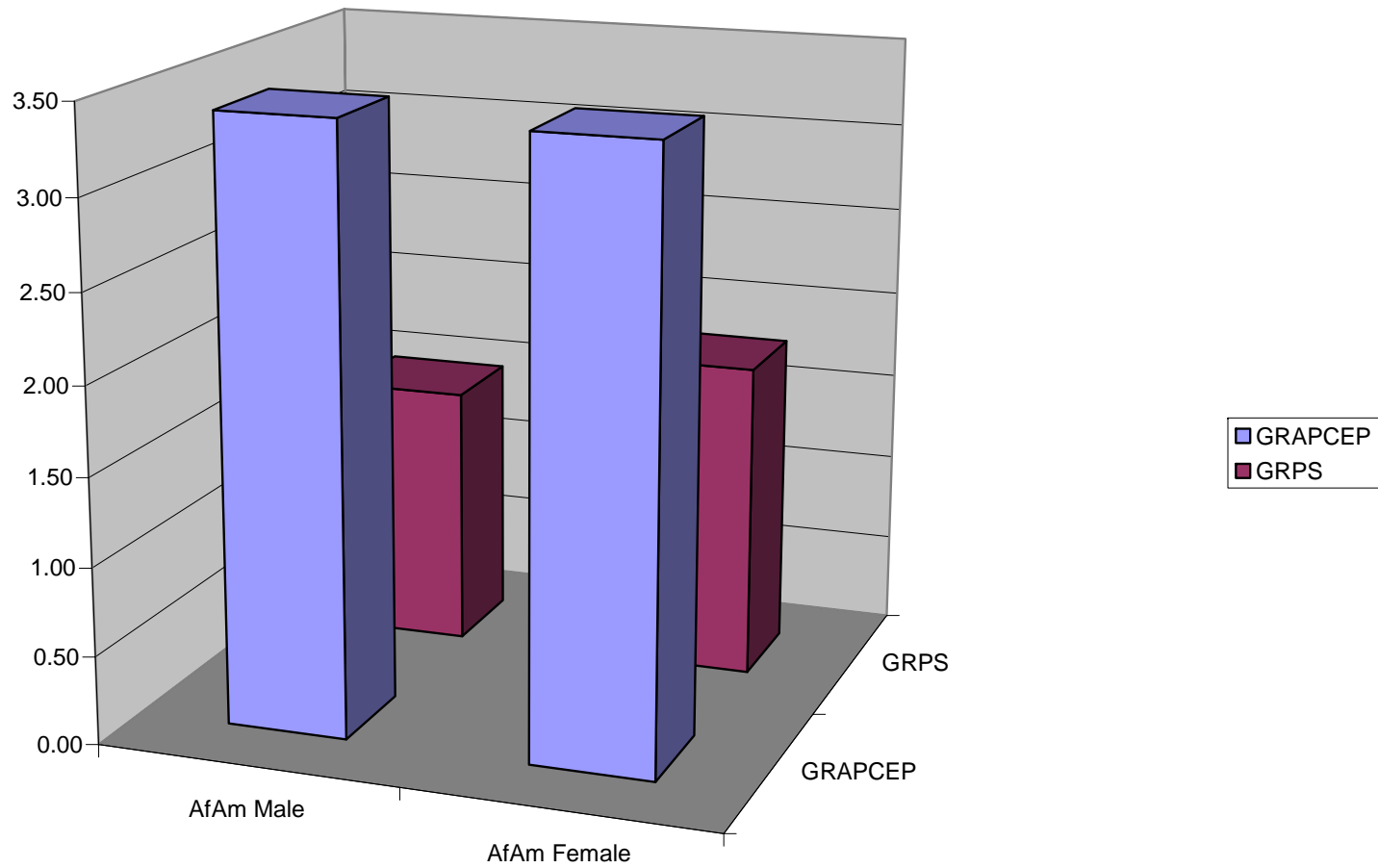
#### Science

Bioinformatics
Biology
Chemistry
Forensic Medicine
Psychology
Nursing
Pre-Med

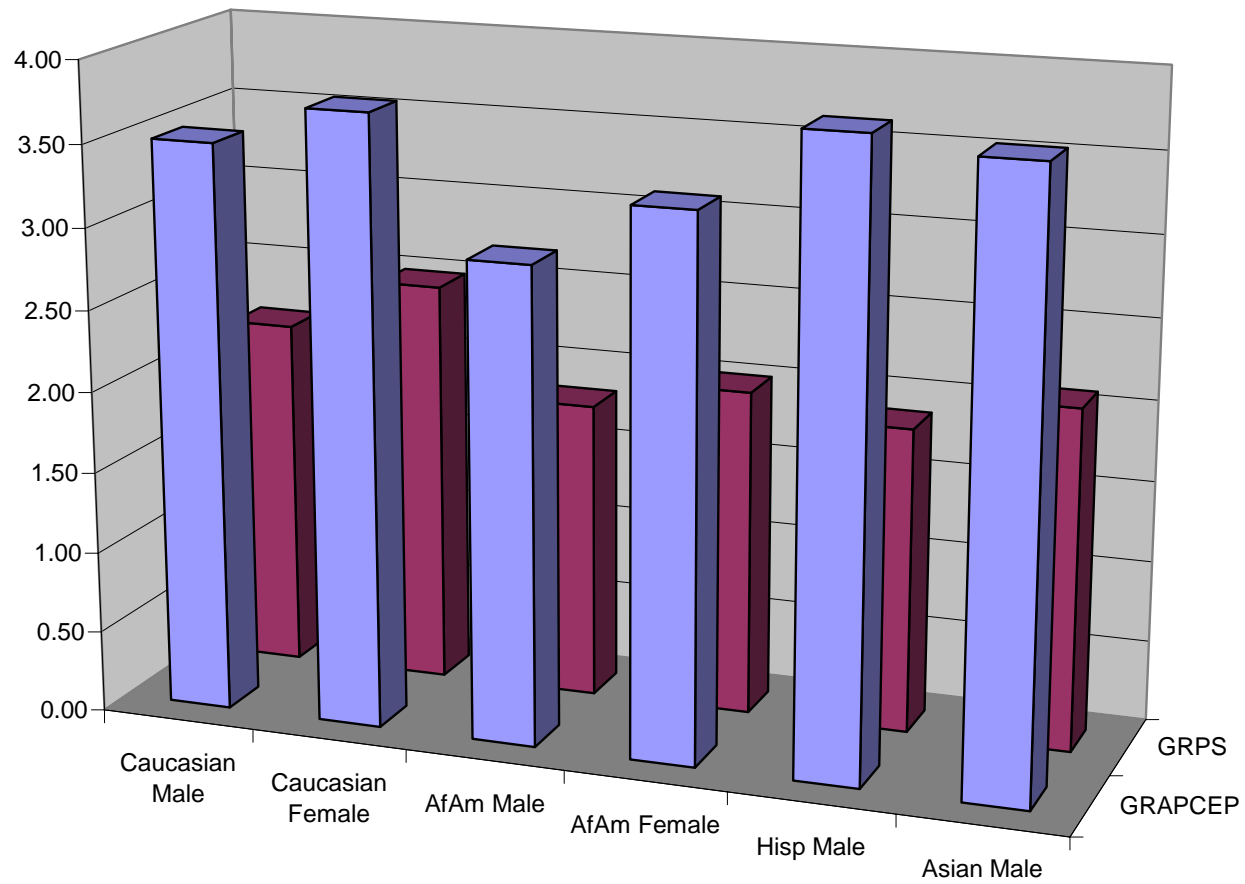
**CHART 1**  
**8th Grade GPA Comparison**  
**May 2004**



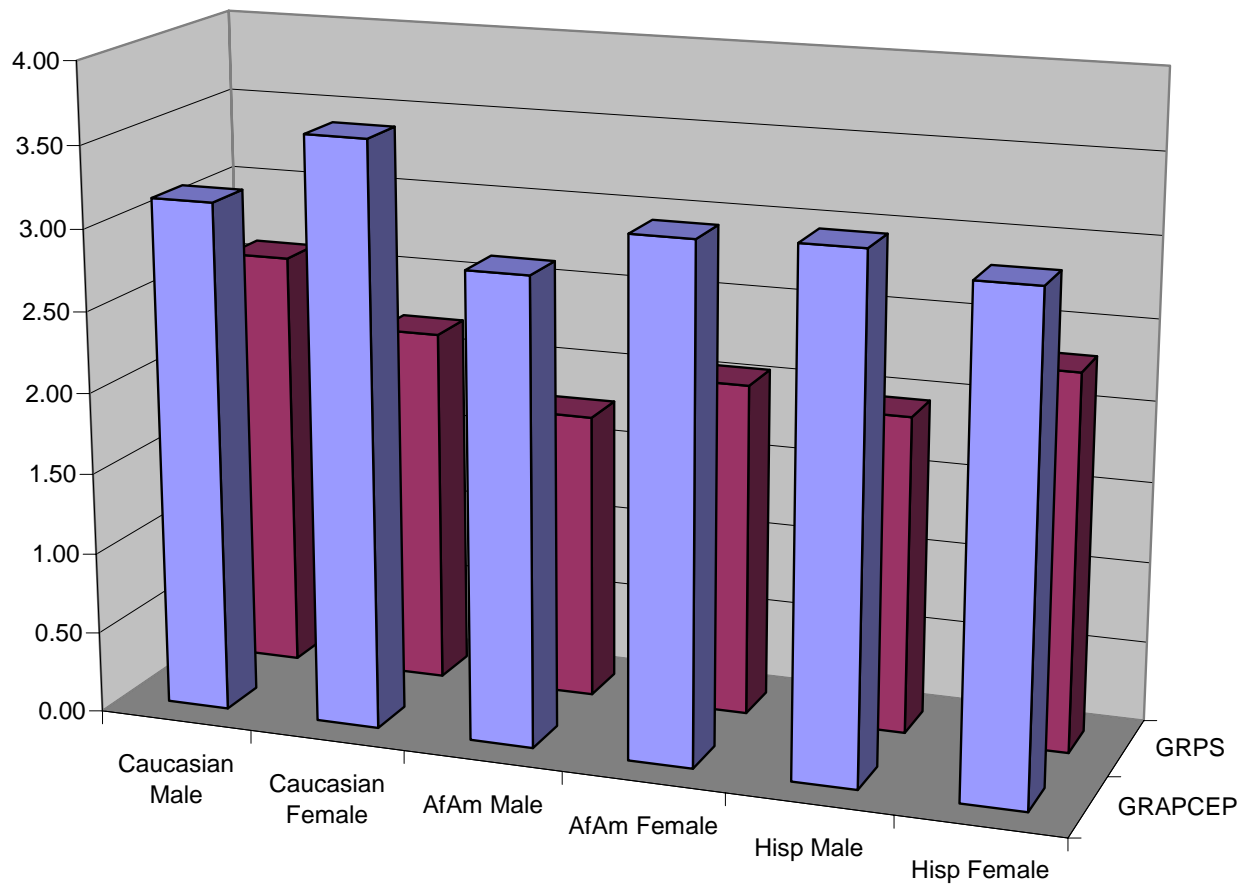
**GRAPH 2**  
**9th Grade GPA Comparison**  
**May 2004**



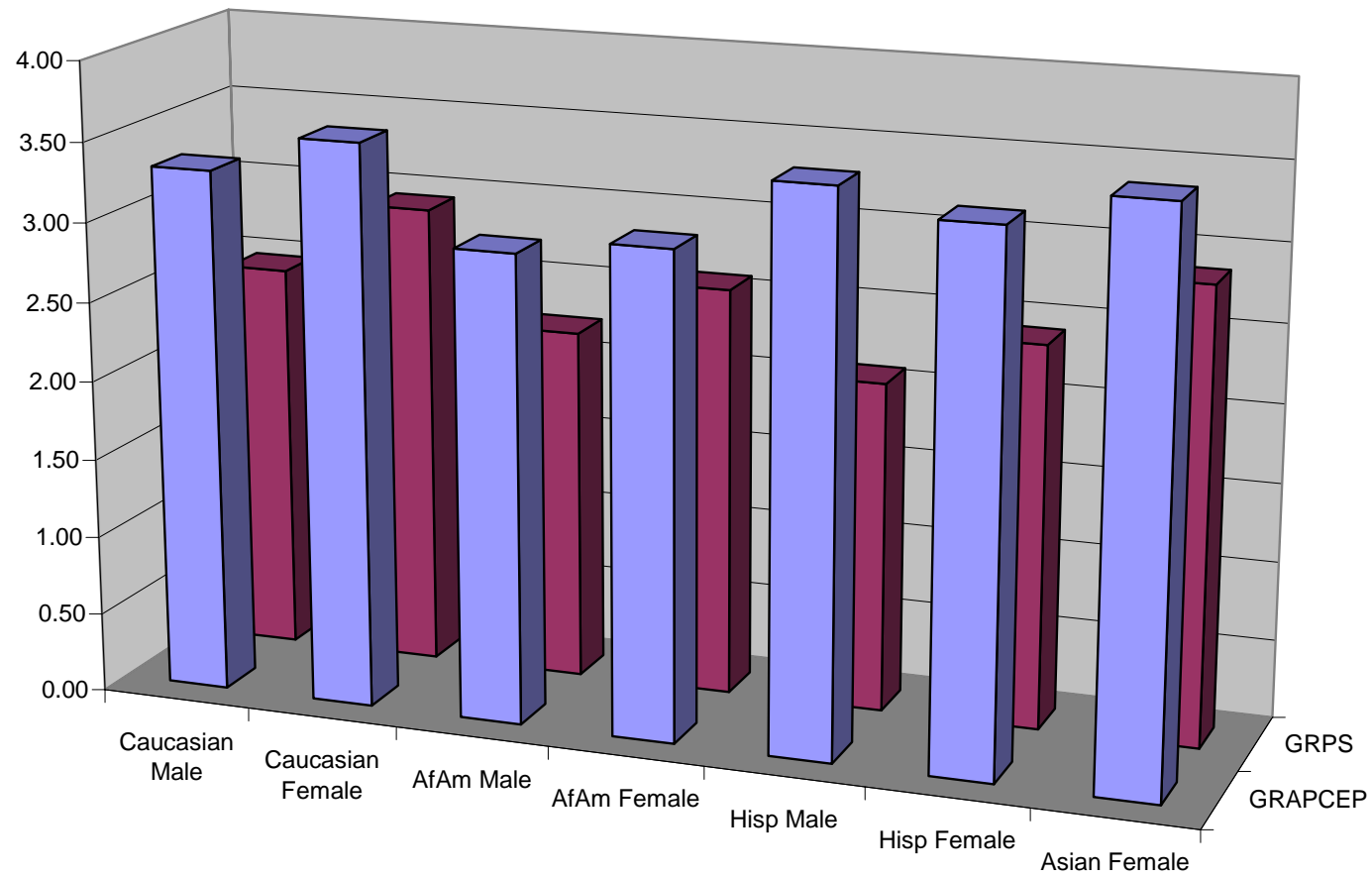
**CHART 3**  
**10th Grade GPA Comparison**  
**May 2004**



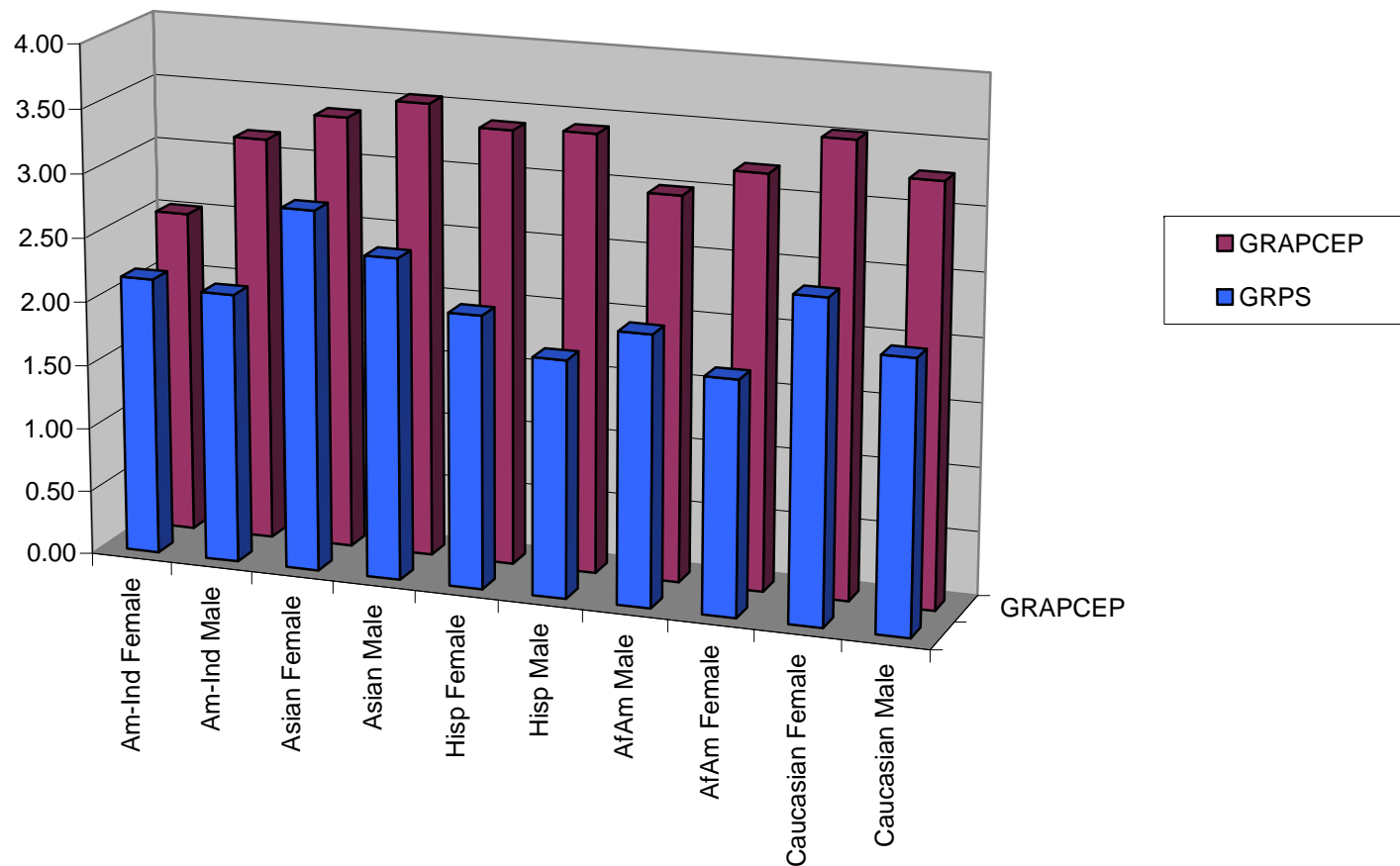
**GRAPH 4**  
**11th Grade GPA Comparison**  
**May 2004**



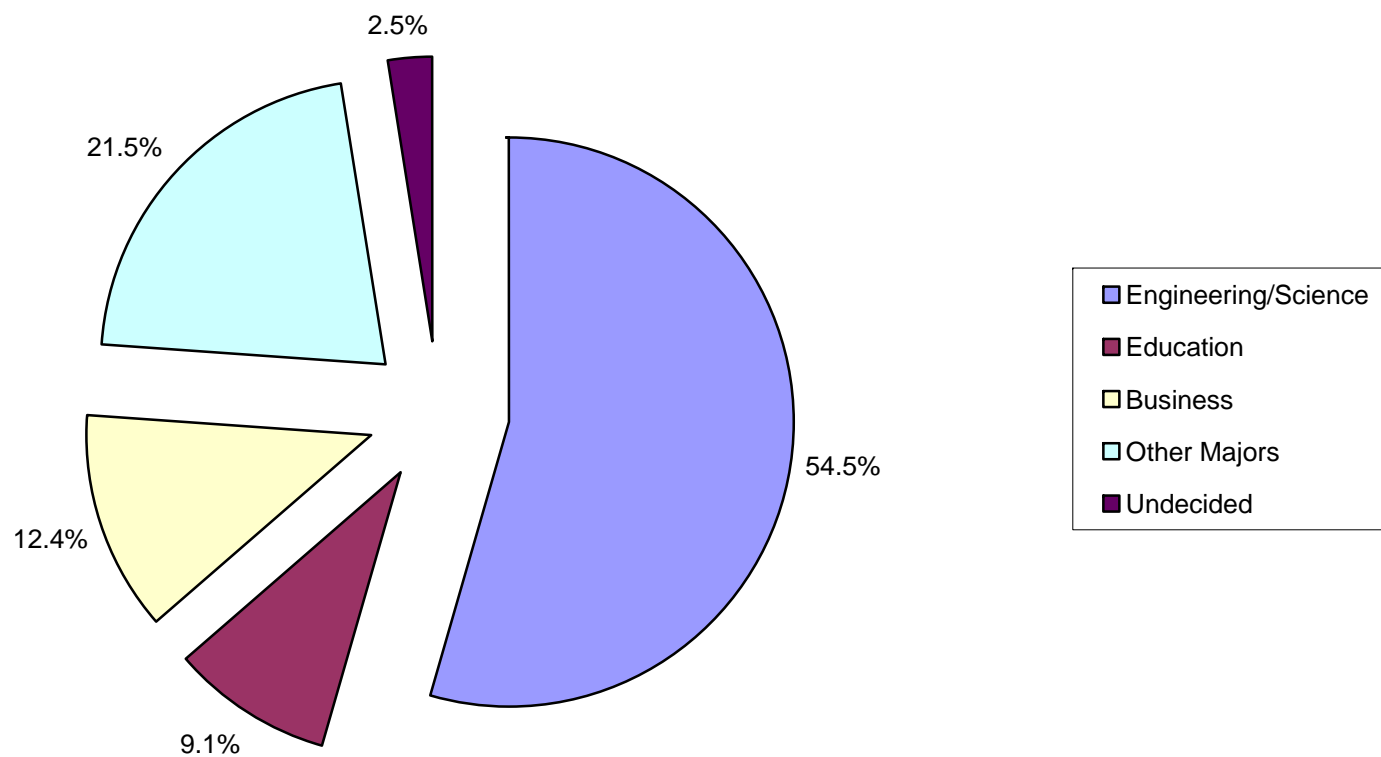
**GRAPH 5**  
**12th Grade GPA Comparison**  
**May 2004**



**GRAPH 6**  
**Grade Level Combined GPA**  
**for all grades (8th, 9th, 10th, 11th & 12th)**  
**May 2004**



**GRAPH 7**  
**Combined GRAPCEP High Graduate**  
**College Program Enrollment Fall 2004**





**GRAPH 8**  
**General college bound students indicated majors**  
**collected from ACT test applicants year 2001**

