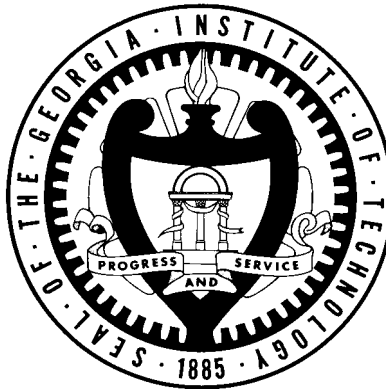




Georgia Institute **of Technology**

General Education Assessment Report: Health and Wellness Objective Spring Semester 2004



**Georgia Tech Office of Assessment
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The Institute Undergraduate Curriculum Committee's Ad Hoc Subcommittee on General Education developed a set of nine general education objectives for all students earning a Georgia Tech baccalaureate degree. Specifically, the objectives call for:

- Technical, mathematical, and scientific competence
- An ability to communicate to and productively interact with others
- An awareness of culture and values in a diverse world
- An understanding of ethical issues surrounding one's personal and professional activities

The Health and Wellness Objective as defined by the IUCC and approved by the Faculty Assembly is stated as follows:

Georgia Tech students will develop an understanding of the psychological and physiological bases of a healthy mental and physical lifestyle.

The specific assessable learning outcomes stemming from this objective are:

Health and Wellness Outcome 1: Students will be able to explain the elements necessary to maintain a healthy lifestyle.

Health and Wellness Outcome 2: Students will be able to describe of the impact of diet, activity, and genetics on health.

An assessment of these outcomes was conducted in the HPS 1040: Health Concepts & Strategies in spring 2004. The course is required for graduation and carries 2 credit hours. Items that addressed the two outcomes were seeded into a multiple choice quiz carrying extra credit. A total of 545 students completed the quiz. On the twenty question quiz, ten questions addressed Outcome 1 and ten questions addressed Outcome 2.

Of the students included in the assessment, GT ID's were matched to provide demographic and enrollment details. For each outcome, a one-way Analysis of Variance (ANOVA) was performed to test for group differences on the basis of gender, college, student level and final course grade. Additionally, an ANOVA was performed on the quartile ranking of the admissions index for each student.¹

¹ The Admission Index is the product of a regression equation that uses high school GPA and SAT Verbal and Math scores to predict first-year GPA at Georgia Tech. The Index was created by the University System of Georgia, and is used by the Office of Enrollment Services to assist with admissions decisions. To determine the quartile cut points, the Admissions Index for all undergraduate students enrolled at GT in Fall 2003 was used.

Health and Wellness Outcome 1

Students will be able to explain the elements necessary to maintain a healthy lifestyle.

Ten questions were included relating to maintaining a healthy lifestyle, with each carrying equal weight. The mean number of questions answered correctly was 8.87. There were no statistically significant differences found among college or admissions index. Differences among gender, student level, and course grade were found. However, the levels of achievement were high among all groups.

Table 1. Totals

Mean	8.87
SD	1.28
n	545

Table 2. By Gender

	<u>Female (0)</u>	<u>Male (1)</u>	<u>F</u>	<u>Sig.</u>
Mean	9.09	8.79	5.76*	.020*
SD	0.98	1.36		
n	146	399		

Table 3. By College

	<u>College of Architecture (1)</u>	<u>College of Computing (2)</u>	<u>College of Engineering (3)</u>	<u>Ivan Allen College (4)</u>	<u>College of Management (5)</u>	<u>College of Sciences (6)</u>	<u>F</u>	<u>Sig.</u>
Mean	8.66	8.84	8.81	9.26	9.06	9.03	1.28	.270
SD	1.92	1.13	1.31	0.66	1.23	0.93		
n	35	45	324	27	48	66		

Table 4. By Student Level

	<u>Freshmen (1)</u>	<u>Sophomore (2)</u>	<u>Junior (3)</u>	<u>Senior (4)</u>	<u>Games-Howell</u>	<u>F</u>	<u>Sig.</u>
Mean	9.00	8.55	8.84	9.21	4>1>2	4.86**	.002**
SD	1.23	1.42	1.10	0.98			
N	324	147	50	24			

Table 5. By Course Grade

	<u>A (4)</u>	<u>B (3)</u>	<u>C (2)</u>	<u>D (1)</u>	<u>F (0)</u>	<u>Games-Howell</u>	<u>F</u>	<u>Sig.</u>
Mean	9.16	8.80	8.31	8.25	8.20	4>3>2,1	8.41***	.000***
SD	0.98	1.33	1.58	1.28	2.49			
n	242	210	80	8	5			

Table 6. By Admissions Index Quartile

	<u>Highest Quartile</u>	<u>Third Quartile</u>	<u>Second Quartile</u>	<u>Lowest Quartile</u>	<u>F</u>	<u>Sig.</u>
Mean	9.03	9.02	8.85	8.93	0.54	.654
SD	0.99	1.27	1.30	1.30		
N	118	119	117	118		

Health and Wellness Outcome 2

Students will be able to describe of the impact of diet, activity, and genetics on health.

Ten questions on the quiz related to this outcome, with each question carrying equal weight. The mean score was 7.88. No significant differences in student performance were found on the basis of gender, college, or student level. Significant differences were found on the basis admissions index quartile. Significant differences were also found on the basis of course grade, lending validity to the results. As with outcome 1, student performance was consistently high among all groups.

Table 7. Totals

Mean	7.88
SD	1.54
n	545

Table 8. By Gender

	<u>Female (0)</u>	<u>Male (1)</u>	<u>F</u>	<u>Sig.</u>
Mean	8.03	7.82	2.03	.160
SD	1.39	1.59		
n	146	399		

Table 9. By College

	<u>College of Architecture (1)</u>	<u>College of Computing (2)</u>	<u>College of Engineering (3)</u>	<u>Ivan Allen College (4)</u>	<u>College of Management (5)</u>	<u>College of Sciences (6)</u>	<u>F</u>	<u>Sig.</u>
Mean	7.97	7.91	7.84	7.85	7.90	7.98	.129	.986
SD	1.82	1.47	1.57	1.63	1.37	1.39		
n	35	45	324	27	48	66		

Table 10. By Student Level

	<u>Freshmen (1)</u>	<u>Sophomore (2)</u>	<u>Junior (3)</u>	<u>Senior (4)</u>	<u>F</u>	<u>Sig.</u>
Mean	7.82	7.88	7.94	8.46	1.30	.275
SD	1.52	1.68	1.30	1.32		
N	324	147	50	24		

Table 11. By Course Grade

	<u>A (4)</u>	<u>B (3)</u>	<u>C (2)</u>	<u>D (1)</u>	<u>F (0)</u>	<u>Games-Howell</u>	<u>F</u>	<u>Sig.</u>
Mean	8.33	7.58	7.48	6.88	6.40	4>3,2,1,0	11.45***	.000
SD	1.28	1.65	1.59	1.96	1.14			
n	242	210	80	8	5			

Table 12. By Admissions Index Quartile

	<u>Highest Quartile</u>	<u>Third Quartile</u>	<u>Second Quartile</u>	<u>Lowest Quartile</u>	<u>Tukey's HSD</u>	<u>F</u>	<u>Sig.</u>
Mean	8.43	7.85	7.76	7.69	4>3,2,1	5.95**	.001**
SD	1.34	1.73	1.55	1.42			
N	118	119	117	118			

Conclusion

Scores for both outcomes were fairly high, and seem to demonstrate student mastery of the material across the Institute. The positive relationship between course grade and the outcome measures indicates content validity between the course performance and the learning outcomes in this general education objective. Since this is the first attempt at measuring outcomes in this general education requirement, no attempt has been made to establish benchmarks at this point in time. Future iterations of this assessment will allow such benchmarks to be created.