

HSS 405-01 TESTS AND MEASUREMENTS IN SPORT SCIENCE (CRN 2398)

University of Dayton

Department of Health and Sport Science

Fall term 2012 – August 22 – December 14, 2012

8:00 – 8:50 a.m., MWF, T.J. Frericks Center Room 51

3 credits

Instructor: L.L. Laubach

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Office Hours Monday 9:00 – 10:45 a.m.

Tuesday 7:00-9:00 a.m. & 2:00 – 4:00 p.m.

Wednesday 9:00–11:00 a.m.

Thursday 7:00 a.m.-9:00 a.m. & 3:00-5:00 p.m.

Friday 9:00 a.m. – 12:00 noon

Students, plan to see me during office

hours, first come, first served, or by

appointment through email to

Rpowers1@udayton.edu

phone 937-229-4225.

Course Textbooks

Morrow, J.R., A.W. Jackson, J.G. Disch, and D.P. Mood, *Measurement and Evaluation in Human Performance* (4th ed). Champaign, IL, Human Kinetics: 2011. ISBN 0-7360-9039-1. (Required)

American College of Sports Medicine. *ACSM's Guidelines for Exercise Testing and Prescription* (8th ed). Philadelphia, PA, Lippincott, Williams & Wilkins: 2009. ISBN 0-7817-4506-3 (Required)

WWW Study Page –

<http://www.humankinetics.com/measurementAndEvaluationInHumanPerformance>

You will be expected to complete the study questions and the practice exams.

Please bring a hand-held calculator to class. It is required that you purchase a Polar HR monitor or its equivalent for use in this class.

Course Objectives

Knowledge: The students will demonstrate knowledge in statistics and its application in test construction, evaluation, and grading.

The students will understand the characteristics of physical fitness, motor performance and other areas of measurement.

Skills: The students will be able to decide on proper statistical techniques to help evaluate research data and classroom performance.

The students will be able to select and administer proper fitness, and body composition tests to help aid in the evaluative procedure of the typical individual.

The students will develop a basic understanding of the usage of the personal computer in tests and measurements in sport science.

The students will develop oral skills and strategies in the presentation of exercise science research studies.

Attitudes: The student will appreciate the use of statistics as an effective tool in measuring and evaluating physical performance.

Values: The students will value that test items should match objectives and that tests should measure the attainment of these objectives.

Course Topics Introduction to Tests and Measurements
Use of Computers in Measurement and Evaluation
Statistics, Data Analysis and Computer Applications
Reliability, Validity, and Grading
Criterion-Referenced Measurement
Physical Fitness Assessment in Adults

Academic Accommodations

To request academic accommodations due to a disability, please contact the office of Professional Support Services in the Department of Learning Enhancement and Academic Development (LEAD) at 937/229-3684. If you have a self-identification form from Professional Support Services indicating that you have a disability which requires accommodation, please present it to me so we can discuss the accommodations you might need in the class.

Professional Peer Group Presentation by Team

Each student is responsible for the assigned readings listed below. These articles are available on closed reserve at the Roesch Library and also can be accessed via the Internet. For Internet access, use your web browser to go library.udayton.edu; E reserves; Electronic Reserves and Resources; user [_](#). Follow these links: Libraries; Roesch Library; Resources; Reserves and Class Lists; Electronic Reserves and Resources; user id; password; Electronic Reserves; 12_FA_HSS_405_01 Laubach, Lloyd and follow the directions. These readings have been made available electronically August 15, 2012.

Materials and key concepts from each of these readings will be included on the pop quizzes, exams, and final exam.

In addition to the individual readings, the instructor will assign a team of two students to each of the journal articles listed. Each team will prepare a **critical, professional** peer group presentation about the article which will be presented by the team to the class. PowerPoint™ must be used for the presentation which should take a minimum of 20 minutes with an additional 5 minutes for questions which the team should anticipate and prepare to answer quickly and succinctly. Team assignments and presentation dates are listed below. Presentations will be given on September 14th and 21st, October 12th, 19th, and 26th, November 2nd, 16th and 30th and December 5th. You must schedule an appointment to see me to discuss the “draft” of your PowerPoint presentation **seven days** before the presentation is to be given.

The PowerPoint presentations must be submitted to your classmates 48 hours before the presentation date. A single grade will be given to each team with each member earning the same grade. Please dress in professional attire when making your presentation.

Presentations by Team	Readings	Date to be Presented
Conkel & Tylicki	Garber	September 14
Kresnak & Massaro	Nelson	September 21
Arnold & Tonner	Haskell	September 21
Brown & Sullivan	Ebbeling	October 12
Dicarlo & Webb	Church	October 12
Edwards & Therriault	Lee	October 19
Grzeszczak & Snow	Bravata	October 19
Hascher & Sciarappa	Bassett	October 26
Hill & Schulz	Sekendiz	October 26
Schwieterman & Howe	Moon	November 2
Hurley & Iannarino	Jackson (men)	November 16
Kiefer & Scanlan	Hass	November 16
Kopfman & Prenger	Grant	November 30
Neylon & McIntyre	Byrne	November 30
Santella, Parish & Mayer	Tanaka & Robergs	December 5

Bassett, Jr., D.R., P.L. Schneider, and G.R. Huntington. Physical activity in an old order Amish community. *Medicine & Science in Sports & Exercise*, Vol. 36, No. 1, 2004, pp. 79-85.

Beets, M.W. and K.H. Pitetti. One-mile run/walk and body mass index of an ethnically diverse sample of youth. *Medicine & Science in Sports & Exercise*, Vol. 36, No. 10, 2004, pp. 1796-1803.

Benton, M.J., Kasper, M.J., Raab, S.A., and Waggener, G.T. Short-Term Effects of Resistance Training Frequency on Body Composition and Strength in Middle-Aged Women. *Journal of Strength and Conditioning Research*, Vol. 25, No. 11, November 2011, pp. 3142-3149.

Bentzur, K.M., L. Kravitz, and D.W. Lockner. Evaluation of the Bod Pod for estimating percent body fat in collegiate track and field female athletes: A comparison of four methods. *Journal of Strength and Conditioning Research*, Vol. 22, No. 6, November 2008, pp. 1985-1991.

Bohannon, R.W. Test-Retest Reliability of the Five-Repetition Sit-To-Stand Test: A Systematic Review of the Literature Involving Adults. *Journal of Strength and Conditioning Research*, Vol. 25, No. 11, November 2011, pp. 3205-3207.

Bravata, D.N., C. Smith-Spangler, V. Sundaram, A.L. Gienger, N. Lin, R. Lewis, C.D. Stave, I. Olkin, and J. R. Sirard. Using pedometers to increase physical activity and improve health. *Journal of the American Medical Association*, Vol. 298, No. 19, November 21, 2007, pp. 2296-2304.

Byrne, N.M., A.P. Hills, G.R. Hunter, R.L. Weinsier, and Y. Schutz. Metabolic equivalent: One size does not fit all. *Journal of Applied Physiology*, Vol. 99, September 2005, pp. 1112-1119.

Chomitz, V.R., M.M. Slining, R.J. McGowan, S.E. Mitchell, G.F. Dawson, and K.A. Hacker. Is there a relationship between physical fitness and academic achievement? Positive results from public school children in the northeastern United States. *Journal of School Health*, Vol. 79, No. 1, January 2009, pp. 30-37.

Christou, D.D., C.L. Gentile, C.A. DeSouza, D.R. Seals, and P.E. Gates. Fatness is a better predictor of cardiovascular disease risk factor profile than aerobic fitness in healthy men. *Circulation*, Vol. 111, Issue 15, April 19, 2005, pp 1904-1914.

Church, T.S., D.M. Thomas, C. Tudor-Locke, P.T. Katzmarzyk, C.P. Earnest, R.Q. Rodarte, C.K. Martin, S.N. Blair, and C. Bouchard. Trends over 5 decades in U.S. occupation-related physical activity and their associations with obesity. *PLoS ONE*, Vol. 6, No. 5:e19657.doi:10.1371/journal.pone.0019657, 2011.

Darling, J.L., Linderman, and L.L. Laubach. Energy expenditure of continuous and intermittent exercise in college-aged males. *Journal of Exercise Physiologyonline*, Vol. 8, No. 4, 2005, pp. 1-8.

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Ebbeling, C.B., A Ward, E.M. Puleo, J. Widrick, and J.M. Rippe. Development of a single-stage submaximal treadmill walking test. *Medicine & Science in Sports & Exercise*, Vol. 23, No. 8, 1991, pp. 966-973.

Esco, M.R., Williford, H.N., Russell, A.R. Cross-Validation of BMI-Based Equations for Predicting Percent Body Fat in Female Collegiate Athletes. *Journal of Exercise Physiologyonline*, Vol. 14, No. 3, June 2011, pp. 43-52.

Evans, E.M., S.A. Arngrimsson, and K.J. Cureton. Body composition estimates from multicomponent models using BIA to determine body water. *Medicine & Science in Sports & Exercise*, Vol. 33, No. 5, 2001, pp. 839-845.

Fulton, J.E., L.C. Masse, S.R. Tortolero, K.B. Watson, K.C. Heesch, H.W. Kohl III, S.N. Blair, and C.J. Gaspersen. Field evaluation of energy expenditure from continuous and intermittent walking in women. *Medicine & Science in Sports & Exercise*, Vol. 33, No. 1, 2001, pp. 163-170.

Garber, C.E., L. Blissmer, M.R. Deschenes, B.A. Franklin, M.J. Lamonte, I—Min Lee, D.C. Nieman, and D.P. Swain. **American College of Sports Medicine Position Stand.** Quantity and quality of exercise for developing and maintaining cardiorespiratory, musculoskeletal, and neuromotor fitness in apparently healthy adults: Guidance for prescribing exercise. *Medicine & Science in Sports & Exercise*, Vol. 43, No. 7, 2011, pp. 1334-1359.

George, J.D., P. R. Vehrs, P.E. Allsen, G.W. Fellingham, and A. G. Fisher. VO_{2max} estimation from a submaximal 1-mile track jog for fit college-age individuals. *Medicine & Science in Sports & Exercise*, Vol. 25, No. 3, 1993, pp 401-406.

Grant, J.A., A. N. Joseph, and P. D. Campagna. The prediction of VO_{2max} : A comparison of 7 indirect tests of aerobic power. *Journal of Strength and Conditioning Research*, Vol. 13, No. 4, 1999, pp. 346-352.

Grissom, J.B. Physical fitness and academic achievement. *Journal of Exercise Physiologyonline*, Vol. 8, No. 1, February 2005, pp. 11-25.

Harrell, J.S., R.G. McMurray, C.D. Baggett, M.L. Pennell, P.F. Pearce and S.I. Bangdiwala. Energy costs of physical activities in children and adolescents. *Medicine & Science in Sports & Exercise*, Vol. 37, No. 2, 2005, pp. 329-336.

Haskell, W. L., I-Min Lee, R. R. Pate, K. E. Powell, S. N. Blair, B. A. Franklin, C. A. Macera, G. W. Heath, P. D. Thompson, and A. Bauman. **AMERICAN COLLEGE OF SPORTS MEDICINE. Position Stand:** Physical Activity and Public Health: Updated Recommendations for Adults from the American College of Sports Medicine and the American Heart Association. *Medicine & Science in Sports & Exercise*, Vol. 39, No. 8, 2007, pp. 1423-1434.

Hass, C.J., L. Garzarella, D. De Hoyos, and M.L. Pollock. Single versus multiple sets in long term recreational weightlifters. *Medicine & Science in Sports & Exercise*, Vol. 32, No. 1, 2000, pp. 235-242

Hultquist, C.N., C. Albright, and D.L. Thompson. Comparison of walking recommendations in previously inactive women. *Medicine Science in Sports & Exercise*, Vol. 37, No. 4, 2005, pp. 676-683.

Jackson, A.S. and M.L. Pollock. Generalized equations for predicting body density of men. *British Journal of Nutrition*, Vol. 40, 1978, pp. 497-504.

Jackson, A.S., M.L. Pollock, and A. Ward. Generalized equations for predicting body density of women. *Medicine & Science in Sports & Exercise*, Vol. 12, No. 3, 1980, pp. 175-182.

- Kalapotharakos, V.I., M. Michalopoulos, S.P. Tokmakidis, G. Godolias, and V. Gourgoulis. Effects of a heavy and a moderate resistance training on functional performance in older adults. *Journal of Strength and Conditioning Research*, Vol. 19, No. 3, 2005, pp. 652-657.
- Kelly, C.M., A.F. Burnett, and M.J. Newton. The effect of strength training on three-kilometer performance in recreational women endurance runners. *Journal of Strength and Conditioning Research*, Vol. 22, No. 2, 2008, pp. 396-403.
- Lee, I-Min, L. Djousse, H.D. Sesso, L. Wang, and J.E. Buring. Physical activity and weight gain prevention. *Journal of the American Medical Association*, Vol. 303, No. 12, March 24/31, 2010, pp. 1173-1179.
- Marzolini, S., P.I. Oh, S.G. Thomas, and J. M. Goodman. Aerobic and resistance training in coronary disease: Single versus multiple sets. *Medicine & Science in Sports & Exercise*, Vol. 40, No. 9, 2008, pp. 1557-1564.
- McInnis, K. J. and G. J. Balady. Effect of body composition on oxygen uptake during treadmill exercise: Body builders versus weight-matched men. *Research Quarterly for Exercise and Sport*, Vol. 70, No. 2, 1999, pp. 150-156.
- Moon, J.R., S.E. Tobkin, P.B. Costa, M. Smalls, W.K. Mieding, J.A. O’Kroy, R.F. Zoeller, and J.R. Stout. Validity of the Bod Pod for assessing body composition in athletic high school boys. *Journal of Strength and Conditioning Research*, Vol. 22, No. 1, 2008, January 2008, pp. 263-268.
- Nader, P.R., M. O’Brien, R. Houts, R. Bradley, J. Belsky, R. Crosnoe, S. Friedman, Z. Mei, and E.J. Susman. Identifying risk for obesity in early childhood. *Pediatrics*, Vol. 118, No. 3, 2006, pp. e594-e601.
- Nelson, M. E., W. J. Rejeski, S. N. Blair, P. W. Duncan, J. O. Judge, A. C. King, C. A. Macera, and C. Castaneda-Sceppa. AMERICAN COLLEGE OF SPORTS MEDICINE. Position Stand: Physical Activity and Public Health in Older Adults: Recommendation from the American College of Sports Medicine and the American Heart Association. *Medicine & Science in Sports and Exercise*, Vol. 39, No. 8, 2007, pp. 1435-1445.
- Pate, R.R., J.R. O’Neill, and J. Mitchell. Measurement of physical activity in preschool children. *Medicine & Science in Sports & Exercise*, Vol. 42, No. 3, March 2010, pp. 508-512.
- Pate, R.R., P.S. Freedson, J.F. Sallis, W.C. Taylor, J. Sirard, S.G. Trost, and M. Dowda. Compliance with physical activity guidelines: Prevalence in a population of children and youth. *Annals of Epidemiology*, Vol. 12, No. 5, 2002, pp. 303-308.
- Peterson, M.J., D.R. Palmer and L.L. Laubach. Comparison of caloric expenditure in intermittent and continuous walking bouts. *Journal of Strength and Conditioning Research*, Vol. 18, No. 2, 2004, pp. 373-376.
- Petry, L., L.L. Laubach, P.W. Hovey, N.L. Rogers, B. Towne, and W.C. Chumlea. Development and validation of an anthropometrically based prediction equation for estimating the percent body fat of post-menopausal black females. *Journal of Exercise Physiologyonline*, Vol. 8, No. 4, 2005, pp. 22-28
- Redelmeier, D.A. and J. A. Greenwald. Competing risks of mortality with marathons: retrospective analysis. *British Medical Journal*, Vol. 335, No. 7633, 2007, pp. 1275-1277
- Robergs, R.A. and R. Landwehr. The surprising history of the “HRmax=220-age” equation. *Journal of Exercise Physiologyonline*, Vol. 5, No. 2, 2002, pp. 1-10.
- Sekendiz, B., M. Cug, and F. Korkusuz. Effects of swiss-ball core strength training on strength, endurance, flexibility, and balance in sedentary women. *Journal of Strength and Conditioning Research*, Vol. 24, No. 11, 2010, pp. 3032-3040.

Tanaka, H., K.D. Monahan, and D.R. Seals. Age-predicted maximal heart rate revisited. *Journal of the American College of Cardiology*, Vol. 37, No. 1, 2001, pp. 153-156.

Volpp, K.G., L.K. John, A.B. Troxel, L. Norton, J. Fassbender, and G. Loewenstein. Financial incentive-based approaches for weight loss. *Journal of the American Medical Association*, Vol. 300, No. 22, December 10, 2008, pp. 2631-2637.

Course Project

Your course project will be to physically test a sample of not less than **30 male or female, or 15 male and 15 female** subjects, to compile the test results, and to statistically analyze and interpret your findings in a report. Your testing project will be completed working in teams of **three**. Team projects will turn in one final paper and you will each receive the same grade. *Your test subjects must be adults (age 30 or older). You will test the following components of fitness:*

- a) *body composition via skinfold calipers using the Jackson, Pollock, Ward equation for women (triceps, suprailiac, thigh) or the Jackson, Pollock equation for men (chest, abdominal, thigh)*
- b) *fat mass*
- c) *lean body mass*
- d) *Grip Strength (right & left) or push-ups*
- e) *Ratio of the sum of right & left grip strength to body weight or push-ups*
- f) *Flexibility via the sit-and-reach box test or the YMCA sit-and-reach test*
- g) *Cardiovascular endurance via the Ebbeling treadmill protocol*
- h) *Body Mass index*
- i) *Waist circumference*
- j) *Age, height, weight and gender*

Use the norms and test descriptions located in: American College of Sports Medicine. ACSM's Guidelines for Exercise Testing and Prescription, 8th ed. Philadelphia: Lippincott, Williams & Wilkins, 2009.

The data for these projects must be gathered by Friday, October 19, 2012 at 8:00 a.m. **You will be responsible for locating and securing the services of your test subjects.**

On Friday, September 14, 2012 you are to submit your testing proposal. This proposal should include at least the following: an introduction, test items, description of test items, **national norms of test items**, description of test subjects, testing dates, equipment needed, etc.

You will be asked to statistically analyze your test results for age, height, weight, and your physical test items, including lean body mass and fat mass.

The statistical analysis of the data will include at least the following computations of each test item: mean, median, mode, standard deviation, coefficient of variation, minimum and maximum score.

Your analysis will also include the computation of **one** of the following: percentiles, z-score transformations, or normal curve scores. **You will then compare your test scores to national norms.** Your next statistical analysis will be to compute a complete inter-correlation matrix to include age, height, weight, and your physical test items. The last statistical analysis will be to develop simple regression equations for predicting (1) waist circumference from lean body weight; (2) % fat from BMI; (3) push-ups or grip strength ratio from fat weight; (4) Flexibility from height; (5) Cardiovascular endurance from % fat. Use the statistical packages *Microsoft Excel or SPSS* to analyze your data.

Your final report **must be word processed (printer output). No exceptions.** I am telling you this now (082212) so there will be no misunderstandings later in the semester. This report should be as professionally prepared as possible. You may want to see examples of excellently prepared Tests and Measurements in Sport Science course projects from previous years in my office.

The final report must contain the following:

- (a) title page (sample is attached)
- (b) table of contents
- (c) introduction
- (d) description of subjects and test items
- (e) descriptive statistics
- (f) comparative statistics
- (g) inferential statistics to include correlation matrix and regression analysis
- (h) discussion
- (i) conclusion
- (j) appendices to include individual data sheets, non-essential computer print-outs, etc.

Student Evaluation Criteria

We will have three (3) exams on the dates to be determined. Each exam will be worth 13.33% of your final grade (i.e., your exam grades will constitute 40% of your final course grade.) These exams **cannot be made up** (i.e., if you miss the exam for *any* reason, you will receive a zero for that exam.)

The final exam, which is *comprehensive*, is worth 20% of your final grade. The course project is worth 20%. The Professional Peer Group Presentation by each team to the class is worth 5%. We will have a minimum of four (4) pop quizzes during the semester. These quizzes will pertain to textbook and outside reading material. These quizzes **cannot be made up** (i.e., if you miss the pop quiz for *any* reason, you will receive a zero for that quiz. I will drop your lowest quiz grade when computing your “average” quiz grade. These quizzes will constitute 15% of your final grade. PLEASE BE PREPARED FOR CLASS.

In summary:

	% of Final Grade	Date
Exam 1	13.33%	September 28
Exam 2	13.33%	November 9
Exam 3	13.33%	December 3
Professional Peer Group Presentation	5.00	September 14, 21 October 12, 19, 26 November 2, 16, 30 December 5
Pop Quizzes	15.00	Unannounced
Course Project	20.00	November 19
Final Exam (comprehensive)	20.00	December 10 (Monday) 8:00 a.m. – 9:50.m.

Note that the Final Exam for HSS 405 is scheduled for Monday, December 10, 2012 from 8:00 a.m. – 9:50 a.m.

The Option 1 grading system for undergraduates includes the following grades, along with their meaning and quality points (recorded to five significant figures):

A	Excellent	4.0000
A-		3.6667
B+		3.3333
B	Good	3.0000
B-		2.6667
C+		2.3333
C	Fair	2.0000
C-		1.6667
D	Poor	1.0000
F	Failed	0.0000

HSS 405 assumes that you have satisfactorily completed MTH 207 and HSS 226. Understanding of statistical concepts and the usage of the *Microsoft Excel* or *SPSS* software packages are basic prerequisites of this course.

PLEASE NOTE THAT YOU WILL BE EXAMINED ON READING MATERIAL FROM YOUR TEXTBOOK AND/OR HANDOUTS THAT MAY NOT BE DISCUSSED IN CLASS. IT IS IMPERATIVE THAT YOU READ THE ASSIGNED MATERIAL.

Your final grade will also be affected by your daily attendance; i.e., having **four** absences will lower your final grade by one letter grade; missing **five** classes will lower your final grade by two letter grades; missing **six** classes will lower your final grade by three letter grades, and missing more than **six** classes will automatically earn you an "F" for the course.

Please place your cell phones in your book bags/back pack and turn off the volume.

DATES TO REMEMBER

Monday, September 3; Labor Day; no class
Friday, October, 5; Fall Break; no class
Monday, November 19; Final Project Due
Wednesday, November 21 and Friday, November 23; Thanksgiving Break; no class
Wednesday, December 5; Last day of class
Friday, December 7; Feast of the Immaculate Conception; no class
Monday, December 10; Final Exam

COURSE PROJECT

Submitted to the Health and Sport Science Department

University of Dayton

in Partial Fulfillment of

the Requirements for the

Course HSS 405 Tests and Measurements in Sport Science

by

Your Name(s)

November 19, 2012

Table 4.1 Percentiles (%ile) for Sum (R + L) of Grip Strength (kg) in Men and Women Aged 18–59 y

Ages (y)	18	19	20–24	25–29	30–34	35–39	40–44	45–49	50–59
Men's Grip Strength (kg)									
%ile									
90	111	110	122	123	124	121	121	110	110
80	106	113	115	115	115	115	115	108	102
70	101	109	110	110	110	109	108	104	96
60	98	104	105	107	108	105	103	99	93
50	96	101	102	103	102	102	100	95	89
40	93	98	99	100	98	98	97	91	85
30	90	94	94	95	95	93	93	82	81
20	86	90	89	90	90	88	87	81	75
10	81	84	80	81	82	79	81	75	66
M	97.1	102.0	102.9	103.6	103.4	101.9	101.4	95.6	89.4
SD	15.5	13.7	16.8	15.6	16.8	17.3	16.1	15.1	16.1
Women's Grip Strength (kg)									
%ile									
90	59	63	61	67	65	66	64	64	57
80	55	59	57	62	60	59	58	57	52
70	52	54	53	57	57	55	54	53	48
60	49	50	50	53	53	53	51	52	45
50	46	48	48	49	49	51	49	49	43
40	43	46	45	48	47	49	47	47	40
30	39	42	42	46	44	46	43	44	38
20	36	39	38	43	41	43	40	40	34
10	31	36	34	37	36	36	34	34	30
M	47.1	49.9	48.7	52.2	51.5	51.9	50.0	50.0	44.0
SD	9.7	10.3	9.8	10.7	11.4	11.6	11.1	10.7	9.8

From H. J. Montoye and D. E. Lamphear, "Grip and Arm Strength in Males and Females Age 10 to 69," *Research Quarterly*, 48 (1), Table 3, p. 113, 1977. Copyright © American Alliance for Health, Physical Education, Recreation and Dance, 1900 Association Dr., Reston, VA 22091.

Table 4.2 Norms for the Ratio of the Sum of Right and Left Grip Strengths to Body Weight (kg · kg⁻¹ wt) in Men and Women Aged 18–59 y

Ages (y)	18	19	20–24	25–29	30–34	35–39	40–49	50–59
Men's Ratios (kg · kg⁻¹ body wt)								
%ile								
90	1.62	1.75	1.73	1.72	1.64	1.62	1.54	1.39
80	1.50	1.54	1.59	1.54	1.52	1.51	1.41	1.30
70	1.47	1.44	1.53	1.47	1.45	1.42	1.34	1.22
60	1.44	1.36	1.45	1.40	1.39	1.35	1.28	1.10
50	1.37	1.33	1.39	1.35	1.33	1.28	1.24	1.14
40	1.33	1.29	1.32	1.28	1.29	1.23	1.19	1.10
30	1.31	1.24	1.25	1.20	1.24	1.17	1.14	1.03
20	1.22	1.17	1.18	1.12	1.18	1.11	1.07	0.98
10	1.16	1.12	1.08	1.01	1.10	1.02	0.99	0.89
M	1.37	1.37	1.39	1.34	1.35	1.30	1.25	1.14
Women's Ratios (kg · kg⁻¹ body wt)								
%ile								
90	1.02	1.10	1.04	1.12	1.05	1.07	1.02	0.90
80	0.95	1.04	0.97	1.02	1.00	1.00	0.93	0.83
70	0.90	0.94	0.91	0.97	0.94	0.93	0.87	0.78
60	0.82	0.85	0.85	0.91	0.89	0.87	0.81	0.71
50	0.78	0.80	0.81	0.86	0.83	0.84	0.77	0.68
40	0.72	0.77	0.77	0.82	0.78	0.80	0.73	0.63
30	0.69	0.74	0.72	0.75	0.72	0.75	0.69	0.69
20	0.65	0.69	0.68	0.68	0.68	0.69	0.68	0.52
10	0.58	0.64	0.61	0.61	0.60	0.60	0.54	0.48
M	0.79	0.85	0.82	0.86	0.83	0.84	0.78	0.68

From H. J. Montoye and D. E. Lamphear, "Grip and Arm Strength in Males and Females Age 10 to 69," *Research Quarterly*, 48 (1), Table 6, p. 116, 1977. Copyright © American Alliance for Health, Physical Education, Recreation and Dance, 1900 Association Dr., Reston, VA 22091.

ACADEMIC HONOR CODE (APPLICABLE TO UNDERGRADUATE STUDENTS)

(Approved by the Academic Senate, April 25, 2008)

<http://campus.udayton.edu/~studev/studenthandbook/PDF/Academics.pdf>

I. Introduction

As a Marianist, Catholic university committed to the education of the whole person, The University of Dayton expects all members of the academic community to strive for excellence in scholarship and in character. As stated in the University's *Student Handbook*, —The University of Dayton expects its faculty and administration to be instrumental in creating an environment in which its students can develop personal integrity. ||

To uphold this tradition, the university community has established an academic honor code for its undergraduate schools, including the College of Arts and Sciences, the School of Business Administration, the School of Education and Allied Professions, and the School of Engineering. Students are requested to sign a pledge certifying that they understand the provisions of the Academic Honor Code and will abide by it upon matriculation to the University.

II. The Honor Pledge

Potential undergraduate students of the University of Dayton shall be made aware of the University's Academic Honor Code after the application period but before matriculation. Upon matriculation, the student shall be requested to sign the pledge as follows:

The University of Dayton Academic Honor Code: A Commitment to Academic Integrity

I understand that as a student of the University of Dayton, I am a member of our academic and social community,

I recognize the importance of my education and the value of experiencing life in such an integrated community, I believe that the value of my education and degree is critically dependent upon the academic integrity of the university community, and so

In order to maintain our academic integrity, I pledge to:

- Complete all assignments and examinations by the guidelines given to me by my instructors,
- Avoid plagiarism and any other form of misrepresenting someone else's work as my own
- Adhere to the Standards of Conduct as outlined in the Academic Honor Code.

In doing this, I hold myself and my community to a higher standard of excellence, and set an example for my peers to follow.


Signed:

Dated:

Faculty shall make known the expectations for completing assignments and examinations at the beginning of each course, and list the expectations within the course syllabus. Faculty are encouraged to discuss these expectations with students in a manner appropriate for each course.

Fall 2012 Academic Calendar

August							September						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4							1
5	6	7	8	9	10	11	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22
26	27	28	29	30	31		23	24	25	26	27	28	29
							30						
October							November						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3
7	8	9	10	11	12	13	4	5	6	7	8	9	10
14	15	16	17	18	19	20	11	12	13	14	15	16	17
21	22	23	24	25	26	27	18	19	20	21	22	23	24
28	29	30	31				25	26	27	28	29	30	
December							<p>8/22 = Classes Begin 9/3 – Labor Day 10/4-5 – Mid-term Break 11/21-23 – Thanksgiving Break 12/6 – Last Day of Classes 12/7 – Feast of Immaculate Conception/Christmas on Campus 12/10-14 – Finals Week</p>						
S	M	T	W	T	F	S							
						1							
2	3	4	5	6	7	8							
9	10	11	12	13	14	15							
16	17	18	19	20	21	22							
23	24	25	26	27	28	29							
30	31												

 = no classes