

PRINCIPLES OF STRENGTH AND CONDITIONING

01:377:170, 1.5 credits, Section MA

Semester: Fall 2023

Department of Kinesiology and Health

Rutgers University

Course information

Pre/co-requisites: none

Online learning site: Canvas <https://canvas.rutgers.edu/>

Schedule: seven-week course from Wed Oct 25 to Wed Dec 13; Mon/Wed from 7:30pm to 8:50pm; no class on Wed Nov 22 during the week of Thanksgiving

Location: class will meet in the Ruth Adams Building 207 for lectures; class will meet in the Institute for Food, Nutrition and Health (IFNH) Building on Mon Nov 14 and Wed Nov 16 for demos/applications of exercises and concepts

Technology requirements for this course: computer with webcam, speakers and microphone are not required for this course but would be needed if virtual office hours are requested and if one or more classes must be done remotely

Cellphones

The use of cellphones is not permitted during class time (7:30pm to 8:50pm).

Instructor information

Instructor: Matt Brzycki (pronounced bris-kee)

email: mb166@kines.rutgers.edu

Virtual office hours: by arrangement

Virtual office hours format: Webex meeting

Canvas messaging and Rutgers email will be used for all information/communication related to this course.

Required Course Materials

Brzycki, M. (2018). *A practical approach to strength and conditioning* (5th ed.). Terre Haute, Indiana: Wish Publishing; ISBN-13: 978-0983575436

Course Description

The purpose of this course is to provide you with the scientific basis of the principles of strength and conditioning using evidence-based material that will enable you to make informed decisions about your health and fitness and apply those concepts to design comprehensive strength and fitness programs for you and diverse populations.

This course partially fulfills the Exercise Science requirement/elective.

This course partially fulfills the Sport Management requirement/elective.

Course Learning Objectives

By the conclusion of this course, you'll:

- understand basic anatomy and muscular function
- explain the dynamics of the three energy systems and how the systems relate to various types of conditioning
- examine the role that genetics plays in the response to strength training
- know approximately 100 different exercises with free weights, machines and manual resistance, including the muscles strengthened and proper technique
- describe various principles of strength and conditioning and apply those concepts in designing programs for diverse populations
- gain a basic understanding of concepts and applications of flexibility training
- recognize the three forms of conditioning (aerobic, anaerobic and metabolic training) and the associated techniques that relate to improving performance
- identify basic concepts in nutrition, including the six nutrients, the five food groups, food labels, caloric contributions, caloric needs and pre-/post-activity foods/fuels
- explain the dynamics of weight management and tips for weight gain/loss/maintenance
- know the history and the adverse effects of steroids

Grading Policy

- This course uses a points-based system to calculate grades. The total number of points in this course is 500. Points are earned from three in-person exams.
- If you do not complete an exam as scheduled, 20% of the maximum points for the exam will be deducted from your score unless you communicate with me BEFORE the date of the exam and receive written approval of an extension. Specifically, 30 points will be deducted from Exams 1 and 2 (which are worth 150 points each) and 40 points will be deducted from Exam 3 (which is worth 200 points).
- If you do not complete an exam as scheduled, you must contact me within 48 hours of the date and time of the exam. If not, you'll receive 0 points for the exam.
- Concerns about a graded exam must be brought to me within seven days of receiving the grade. Exam grades are finalized after this seven-day period.
- Grades on Canvas will be updated regularly; if you notice any discrepancies or have any questions, please do not wait until the end of the semester – let me know right away.
- There are no "extra-credit" assignments in this course.
- Final grades are not negotiable.

Letter Grade	Percent	Points Needed
A	90.0-100	450 to 500
B+	85.0-89.9	425 to 449
B	80.0-84.9	400 to 424
C+	75.0-79.9	375 to 399
C	70.0-74.9	350 to 374
D	60.0-69.9	300 to 349
F	0-59.9	000 to 299

Exams

Exams (150 points/Exam 1; 150 points/Exam 2; and 200 points/Exam 3)

There will be three in-person exams based on lectures and assigned readings. Exam format will be multiple-choice questions.

Exams 1 and 2 (150 points each) will be completed in class from 7:30pm to 8:50pm. Once you begin these exams, you will have 80 minutes to complete each one unless you begin after 7:30pm.

Exam 3 (200 points) will be completed in class from 8:00pm to 11:00pm on Mon Dec 18 during the final exam period. Once you begin this exam, you will have 180 minutes to complete it unless you begin after 8:00pm. This exam is not cumulative.

Summary of Exams

Exam	Date	Points	Percent of Grade
Exam 1	Wed Nov 08	150	30.00%
Exam 2	Mon Nov 27	150	30.00%
Exam 3	Mon Dec 18	200	40.00%
Total		500	100.00%

Course Policies and Procedures

Academic Integrity

You're responsible for becoming familiar with the definitions, procedures and sanctions outlined in Rutgers University Academic Integrity Policy before submitting any assignment or exam. The policy can be found at: <http://nbacademicintegrity.rutgers.edu/>

You should conduct yourself with the highest standards of academic honesty. Examples of academic dishonesty include: copying others' written work, not citing sources, and submitting the same assignments/papers multiple times in different courses. All incidences of questionable academic integrity are a serious matter and may result in a no grade (0.0) for the assignment or course. Academic dishonesty will not be tolerated and will be treated in accordance with Rutgers University Academic Integrity Policy.

Remember the Rutgers Honor Pledge: "On my honor, I have neither received nor given any unauthorized assistance on this examination (assignment)."

Note that all of the course materials – including the syllabus, lecture slides (PowerPoints), lecture recordings and exams – are the intellectual property of the instructor. As a result, you're prohibited from copying or posting any of these course materials online or otherwise distributing course materials without my explicit permission. This includes "tutoring" websites such as Chegg and CourseHero as well as group messaging website/apps such as GroupMe. Any incidents in which you post course materials online or anywhere else will be reported to the Office of Student Conduct as an Academic Integrity Violation.

Expectations

- Complete all readings and assignments on time.

- Actively participate in all class activities.
- Follow the honor code when completing all exams.
- Ask questions to enhance understanding of the material.
- Communicate with me if you have questions pertaining to the material or the course.
- Check your email and Canvas announcements regularly to stay informed about course updates.

Email Etiquette

When emailing me, please use your Rutgers email address and identify yourself by full name and course number. You're expected to place the course number followed by the subject in the subject line, use appropriate email etiquette and maintain reasonable expectations for my responses. I will try respond to your emails within two business days.

Plagiarism

By enrolling in this course, you're indicating implicitly that you have read, understood and accepted Rutgers University's policies and procedures regarding academic integrity and dishonesty. Plagiarism and cheating will not be tolerated and all University policies apply. Specifically, if plagiarism or cheating is suspected, you'll be asked to meet with me. If I conclude that an instance of plagiarism or cheating has occurred, you'll be subject to an appropriate sanction or penalty outlined in Rutgers University Academic Integrity Policy.

Please note that plagiarism is using the ideas or writings of another as one's own. It varies in degree and severity. The most severe is the use of another's entire paper word-for-word. Less severe is the use of another's sentence, paragraph or ideas without giving credit to that individual (i.e., without providing a reference).

Make-up Policy

No make-up exams or extensions will be offered for missed exams except in one of the following situations, provided that I'm notified at least 24 hours before the date and time of the exam:

- Athletic or other Rutgers sponsored trips: Travel dates and times accompanied by a signed memo from the group's advisor/coach must be presented to me prior to travel dates.
- Religious observances.
- Extenuating circumstances: This includes (but is not limited to) family emergencies, severe illnesses, accidents, etc. It will be my prerogative whether or not the student will be allowed to take a make-up exam or receive an extension.

Diversity & Inclusion

The Department of Kinesiology and Health supports an inclusive learning environment wherein diversity and authenticity are valued. We are committed to creating a culture of equality that respects the diverse voices of our students, faculty and staff. We will continuously strive to create a curriculum and academic environment to reflect the community we serve and drive innovation, social responsibility and excellence. Our diversity in thought, skill and academic discipline is a resource and strength which stands to benefit the whole and positively contribute to University and global reach.

RUTGERS UNIVERSITY STUDENT WELLNESS SERVICES

Report a Bias Incident: If you experience or witness an act of bias or hate, report it to someone in authority. You may file a report online and you will be contacted within 24 hours. The bias reporting page is here: <https://studentaffairs.rutgers.edu/bias-incident-reporting>. Click here to report a bias incident:
https://cm.maxient.com/reportingform.php?RutgersUniv&layout_id=25

Bias is defined by the University as an act, verbal, written, physical, psychological, that threatens, or harms a person or group on the basis of race, religion, color, sex, age, sexual orientation, gender identity or expression, national origin, ancestry, disability, marital status, civil union status, domestic partnership status, atypical heredity or cellular blood trait, military service or veteran status.

Counseling, ADAP & Psychiatric Services (CAPS)

848-932-7884

17 Senior Street, New Brunswick, NJ 08901

<http://health.rutgers.edu/medical-counseling-services/counseling/>

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance and psychiatric services staffed by a team of professionals within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Crisis Intervention: <http://health.rutgers.edu/medical-counseling-services/counseling/crisis-intervention/>

Report a Concern: <http://health.rutgers.edu/do-something-to-help/>

Violence Prevention & Victim Assistance (VPVA)

848-932-1181

3 Bartlett Street, New Brunswick, NJ 08901

www.vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

848-445-6800

Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854

<https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at:

<https://webapps.rutgers.edu/student-ods/forms/registration>.

COURSE OVERVIEW

Week	Day	Date	Topic(s)	Reading(s)	Due Date
8	Mon	Oct 23	no class		
	Wed	Oct 25	Course Introduction; Basic Anatomy and Muscular Function	Chap 01	
9	Mon	Oct 30	The Physiological Basis of Physical Training; Genetics and Strength Potential	Chap 02 Chap 03	
	Wed	Nov 01	Strength Training	Chap 04	
10	Mon	Nov 06	Strength Training for Females; Strength Training for Youths; Strength Training for Older Adults; Power Training; Skill Training	Chap 05 Chap 06 Chap 07 Chap 17 Chap 18	
	Wed	Nov 08	Exam 1 (150 points)	Chaps 01 to 07, 17 and 18	Wed Nov 08 (in person)
11	Mon	Nov 13	Free-Weight Exercises; Machine Exercises	Chap 08 Chap 09	
	Wed	Nov 15	Manual-Resistance Exercises; Flexibility Training	Chap 10 Chap 13	
12	Mon	Nov 20	Designing and Varying the Strength Program; Rehabilitative Training	Chap 11 Chap 12	
	Wed	Nov 22	no class (Fri classes)		
13	Mon	Nov 27	Exam 2 (150 points)	Chaps 08 to 13	Mon Nov 27 (in person)
	Wed	Nov 28	Aerobic Training; Anaerobic Training; Metabolic Training	Chap 14 Chap 15 Chap 16	
14	Mon	Dec 04	Nutritional Training; Nutritional Supplements	Chap 19 Chap 20	
	Wed	Dec 06	Weight Management; A Primer on Steroids	Chap 22 Chap 23	
15	Mon	Dec 11	Strength and Conditioning FAQ	Chap 25	
	Wed	Dec 13	Review/Open Discussion	Chaps 14 to 16, 19, 20, 22, 23 and 25	
16	Mon	Dec 18	Exam 3 (200 points)	Chaps 14 to 16, 19, 20, 22, 23 and 25	Mon Dec 18 (in person)