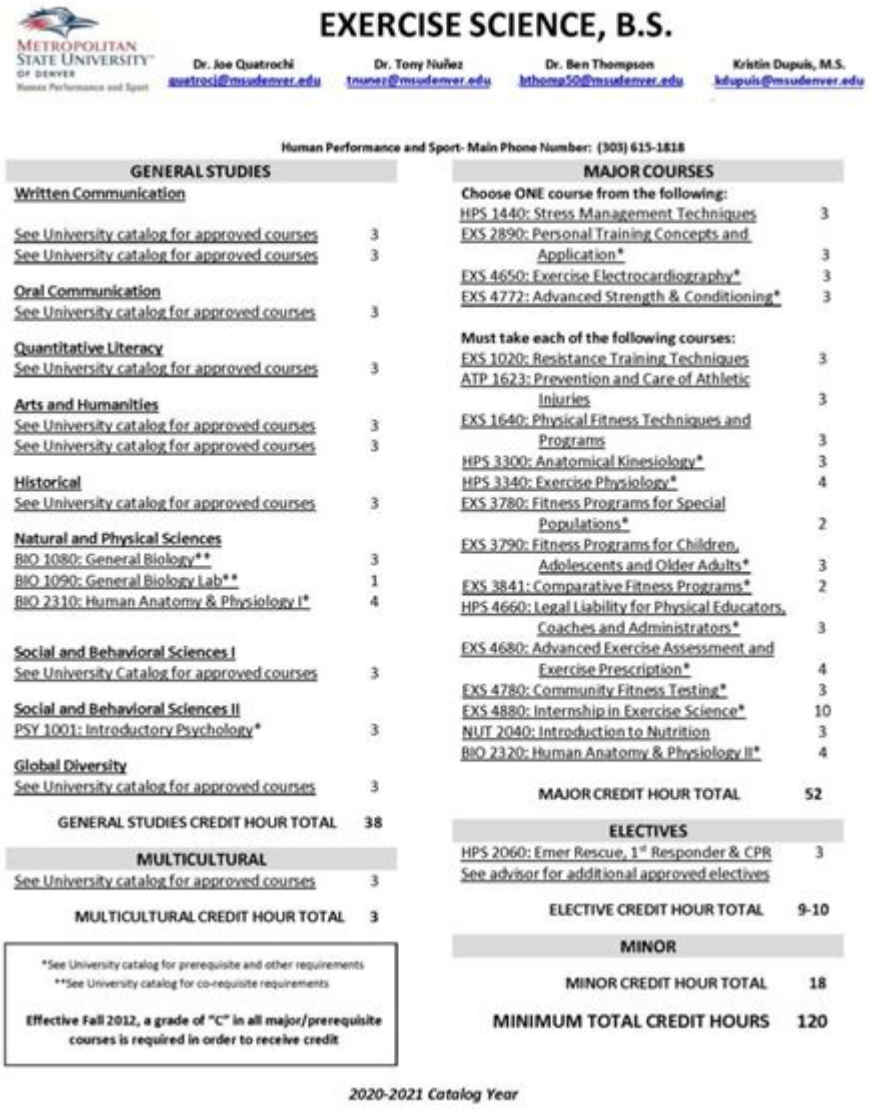
Exercise Science Degree Plan



METROPOLITAN STATE UNIVERSITY OF DENVER
Human Performance and Sport

EXERCISE SCIENCE, B.S.

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GENERAL STUDIES	
Written Communication	
See University catalog for approved courses	3
See University catalog for approved courses	3
Oral Communication	
See University catalog for approved courses	3
Quantitative Literacy	
See University catalog for approved courses	3
Arts and Humanities	
See University catalog for approved courses	3
See University catalog for approved courses	3
Historical	
See University catalog for approved courses	3
Natural and Physical Sciences	
BIO 1080: General Biology**	3
BIO 1090: General Biology Lab**	1
BIO 2310: Human Anatomy & Physiology I*	4
Social and Behavioral Sciences I	
See University Catalog for approved courses	3
Social and Behavioral Sciences II	
PSY 1001: Introductory Psychology*	3
Global Diversity	
See University catalog for approved courses	3
GENERAL STUDIES CREDIT HOUR TOTAL	38
MULTICULTURAL	
See University catalog for approved courses	3
MULTICULTURAL CREDIT HOUR TOTAL	3

*See University catalog for prerequisite and other requirements
**See University catalog for co-requisite requirements

Effective Fall 2012, a grade of "C" in all major/prerequisite courses is required in order to receive credit

MAJOR COURSES	
Choose ONE course from the following:	
HPS 1440: Stress Management Techniques	3
EXS 2890: Personal Training Concepts and Application*	3
EXS 4650: Exercise Electrocardiography*	3
EXS 4772: Advanced Strength & Conditioning*	3
Must take each of the following courses:	
EXS 1020: Resistance Training Techniques	3
ATP 1623: Prevention and Care of Athletic Injuries	3
EXS 1640: Physical Fitness Techniques and Programs	3
HPS 3300: Anatomical Kinesiology*	3
HPS 3340: Exercise Physiology*	4
EXS 3780: Fitness Programs for Special Populations*	2
EXS 3790: Fitness Programs for Children, Adolescents and Older Adults*	3
EXS 3841: Comparative Fitness Programs*	2
HPS 4660: Legal Liability for Physical Educators, Coaches and Administrators*	3
EXS 4680: Advanced Exercise Assessment and Exercise Prescription*	4
EXS 4780: Community Fitness Testing*	3
EXS 4880: Internship in Exercise Science*	10
NUT 2040: Introduction to Nutrition	3
BIO 2320: Human Anatomy & Physiology II*	4
MAJOR CREDIT HOUR TOTAL	52
ELECTIVES	
HPS 2060: Emer Rescue, 1st Responder & CPR	3
See advisor for additional approved electives	
ELECTIVE CREDIT HOUR TOTAL	9-10
MINOR	
MINOR CREDIT HOUR TOTAL	18
MINIMUM TOTAL CREDIT HOURS	**120**

2020-2021 Catalog Year

Exercise science degree plan is a comprehensive educational framework designed for students pursuing a career in fitness, health, and wellness. This multidisciplinary field integrates aspects of biology, physiology, anatomy, nutrition, and psychology to provide a holistic understanding of human movement and its impact on health. In this article, we will explore the components of an exercise science degree plan, career opportunities, essential skills acquired, and the importance of internships and practical experience.

Understanding Exercise Science

Exercise science is the study of how physical activity affects the body and contributes to overall health. It encompasses various disciplines, including kinesiology, biomechanics, exercise physiology, and sports

psychology. Students in an exercise science program learn to analyze human movement, understand the physiological responses to exercise, and apply this knowledge to enhance performance and promote health.

The Importance of an Exercise Science Degree

The demand for professionals in the health and fitness industry continues to grow, driven by an increasing emphasis on preventive health and wellness. An exercise science degree equips students with the knowledge and skills needed to pursue careers in various sectors, including:

- Health and fitness clubs
- Rehabilitation centers
- Sports organizations
- Corporate wellness programs
- Research institutions

With a solid foundation in exercise science, graduates can effectively contribute to improving individual and community health outcomes.

Components of an Exercise Science Degree Plan

An exercise science degree plan typically spans four years for a bachelor's degree, although some programs may offer associate degrees or master's degrees in specialized areas. The curriculum is designed to provide a blend of theoretical knowledge and practical experience. Key components include:

Core Courses

The core curriculum generally covers fundamental subjects essential for understanding exercise science. Common courses include:

1. Anatomy and Physiology - Study of the human body's structure and function.
2. Exercise Physiology - Examination of the body's responses and adaptations to physical activity.
3. Biomechanics - Analysis of movement patterns and forces involved in human motion.
4. Kinesiology - Exploration of body movement and its implications for health and performance.
5. Nutrition - Understanding dietary principles and their impact on exercise and health.

Elective Courses

In addition to core courses, students often have the opportunity to choose electives that align with their career goals and interests. Possible electives include:

- Sports Psychology - Understanding the mental aspects of sports and exercise.
- Strength and Conditioning - Principles and practices for enhancing athletic performance.
- Health Promotion/Disease Prevention - Strategies for promoting health and preventing diseases.
- Exercise Testing and Prescription - Techniques for assessing fitness levels and designing exercise programs.

Laboratory and Practical Experience

Hands-on experience is a critical aspect of an exercise science degree plan. Students may participate in laboratory sessions where they can apply theoretical knowledge in practical settings. This may involve:

- Conducting fitness assessments
- Analyzing movement patterns
- Designing and implementing exercise programs

Furthermore, many programs incorporate internships, providing students with real-world experience in various settings, such as gyms, rehabilitation centers, or sports teams.

Skills Developed in an Exercise Science Degree Program

An exercise science degree plan fosters a range of skills that are essential for success in the health and fitness industry. Key skills include:

1. Analytical Skills - Ability to assess data, interpret results, and make informed decisions based on evidence.
2. Communication Skills - Proficiency in conveying complex concepts to clients, colleagues, and stakeholders.
3. Problem-Solving Skills - Capability to develop strategies to address individual needs and challenges.
4. Leadership Skills - Experience in guiding and motivating individuals or groups toward achieving their fitness goals.
5. Research Skills - Familiarity with conducting studies and evaluating scientific literature.

These skills prepare graduates to work effectively in various roles and adapt to the ever-evolving landscape of health and fitness.

Career Opportunities in Exercise Science

Graduates with an exercise science degree have a multitude of career options available to them. Some of the most common career paths include:

1. Fitness Trainer/Instructor

Fitness trainers and instructors work directly with clients to develop personalized exercise programs, provide guidance during workouts, and motivate them to reach their fitness goals. They may work in gyms, health clubs, or as independent contractors.

2. Exercise Physiologist

Exercise physiologists analyze clients' fitness levels and develop tailored exercise programs to improve their health and fitness. They often work in rehabilitation centers, hospitals, or corporate wellness programs.

3. Strength and Conditioning Coach

Strength and conditioning coaches work with athletes to enhance their performance through strength training and conditioning programs. They may be employed by sports teams, schools, or fitness facilities.

4. Sports Nutritionist

Sports nutritionists specialize in advising athletes on dietary practices that optimize performance and recovery. They assess nutritional needs and provide guidance on meal plans and supplementation.

5. Health and Wellness Coach

Health and wellness coaches support clients in making lifestyle changes to improve their overall well-being. They may focus on nutrition, physical activity, stress management, and more.

Importance of Internships and Practical Experience

Internships and practical experiences are invaluable components of an exercise science degree plan. They provide students with the opportunity to apply theoretical knowledge in real-world settings, enhancing their learning and professional development.

Benefits of Internships

- Networking Opportunities: Internships allow students to connect with professionals in the field, which can lead to job opportunities post-graduation.
- Skill Development: Hands-on experience helps students develop practical skills that enhance their employability.
- Resume Building: Relevant experience on a resume can set candidates apart in a competitive job market.
- Career Exploration: Internships provide insights into different career paths, helping students make informed decisions about their future.

Conclusion

In conclusion, an exercise science degree plan offers a robust curriculum designed to prepare students for a variety of rewarding careers in the health and fitness industry. By combining theoretical knowledge with practical experience, graduates are equipped with the essential skills needed to promote health, enhance performance, and contribute to the well-being of individuals and communities. As the demand for health and fitness professionals continues to rise, pursuing an exercise science degree can be a fulfilling and impactful choice for those passionate about helping others achieve their fitness goals.

Frequently Asked Questions

What core subjects are typically included in an exercise science degree plan?

An exercise science degree plan typically includes core subjects such as anatomy, physiology, kinesiology, biomechanics, nutrition, exercise prescription, and research methods.

Are there any specializations available within an exercise science degree

program?

Yes, many exercise science degree programs offer specializations such as strength and conditioning, sports coaching, fitness management, exercise rehabilitation, and clinical exercise physiology.

What career opportunities can I pursue with an exercise science degree?

Graduates with an exercise science degree can pursue various careers, including personal trainer, exercise physiologist, sports coach, fitness director, and health and wellness consultant.

Is an internship required in an exercise science degree plan?

Many exercise science degree programs require or strongly recommend internships to provide practical experience in the field, helping students apply their knowledge in real-world settings.

How does an exercise science degree prepare students for certifications?

An exercise science degree provides foundational knowledge and skills that align with certification requirements from organizations such as the National Strength and Conditioning Association (NSCA) and the American College of Sports Medicine (ACSM).

What is the typical duration of an exercise science degree program?

Most exercise science degree programs are designed to be completed in four years for a bachelor's degree, while master's programs typically take an additional two years.

Exercise Science Degree Plan

Exercise: 7 benefits of regular physical activity - Mayo Clinic
Aug 26, 2023 · Improve your heart health, mood, stamina and more with regular physical activity.

Physical activity and exercise guidelines for all Australians
May 7, 2021 · Physical activity and exercise guidelines for all Australians Australia’s physical activity and sedentary behaviour guidelines outline how much physical activity you should do, the importance of reducing the time you spend sitting or lying down, and how much sleep children and young people should get. Needs vary depending on your age.

Exercise: How much do I need every day? - Mayo Clinic
Jul 26, 2023 · Moderate aerobic exercise includes activities such as brisk walking, biking, swimming and mowing the lawn. Vigorous aerobic exercise includes activities such as running, swimming laps,

heavy yard work and aerobic dancing. You can do strength training by using weight machines or weights, your own body weight, heavy bags or resistance bands.

Physical activity and exercise | Australian Government Department ...
4 days ago · Physical activity and exercise Physical activity is important at any age for good physical and mental health and wellbeing. Find out how active you should be, how to add activity into your daily life, and what we're doing to help everyone become more active.

Exercise and stress: Get moving to manage stress - Mayo Clinic
Mar 26, 2025 · Find the connection between exercise and stress relief — and learn why exercise should be part of your stress management plan.

About physical activity and exercise | Australian Government ...
About physical activity and exercise Being active is important to good health and wellbeing at any age. Read about what we mean by physical activity and sedentary behaviour, how active Australians are, and why everyone should be active every day to stay healthy.

Fitness program: 5 steps to get started - Mayo Clinic
Dec 5, 2023 · It's easy to say that you'll exercise every day. But you'll need a plan. As you design your fitness program, keep these points in mind: Think about your fitness goals. Are you starting a fitness program to help lose weight? Or do you have another reason, such as training for a marathon? Having clear goals can help you measure your progress and stay motivated. Make ...

Fitness basics - Mayo Clinic
Mar 29, 2024 · Learn about stretching, flexibility, aerobic exercise, strength training and sports nutrition.

Exercise for weight loss: Calories burned in 1 hour - Mayo Clinic
May 8, 2024 · Trying to lose weight or at least not gain more? Find out how many calories are burned by an hour walking, swimming or biking.

Exercise intensity: How to measure it - Mayo Clinic
Aug 25, 2023 · Exercise intensity is a subjective measure of how hard physical activity feels to you while you're doing it, called your perceived exertion. Your perceived exertion may be different from what someone else feels doing the same exercise.

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