



COURSE DATA

Data Subject

Code	33225
Name	Physical exercise for human groups with special needs
Cycle	Grade
ECTS Credits	6.0
Academic year	2024 - 2025

Study (s)

Degree	Center	Acad. year	Period
1312 - Degree in Physical Activity and Sport Sciences	Faculty of Physical Education and Sport Sciences	3	First term
1331 - Degree in Physical Activity and Sport Sciences (Ont)	Faculty of Physical Education and Sport Sciences	3	First term

Subject-matter

Degree	Subject-matter	Character
1312 - Degree in Physical Activity and Sport Sciences	21 - Physical exercise for people with special needs	Obligatory
1331 - Degree in Physical Activity and Sport Sciences (Ont)	21 - Ejercicio físico para poblaciones con necesidades especiales	Obligatory

Coordination

Name	Department
COLADO SANCHEZ, JUAN CARLOS	122 - Physical and Sports Education

SUMMARY

Physical Exercise for Populations with Special Needs refers to physical activity designed and systematically developed with special emphasis on the needs, interests and abilities of those people who, beyond their normal evolutionary process, have a reduced and particular conditions due to single or combined health problems, disability and / or socio-economic level.

For all this, in this subject will show a broad theoretical and practical view of the most important and scientifically agreed guidelines for physical exercise prescription that demarcate the professional performance for some of the many different groups that may be susceptible to benefit from different types of programs and exercises tailored to their singularities.



To promote greater coherence and rigor in the applicability to the field of sport and physical education of the different conceptual, procedural and attitudinal content to be developed in this course, will be done, preliminary and transversely, a contextualization to help understand better the regulatory framework and social context of reference in which they will have to professionally develop the future graduates in Science of Physical Activity and Sport.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements are not needed, moreover of the requirements by the own enrollment restrictions and also related to the approval of other subjects.

Students need a recommended cross-sectional analysis in order to relate the knowledge of this subject with previous developed in other subjects.

1312 - Degree in Physical Activity and Sport Sciences

- Apply the principles of fundamental rights, gender equality, equal opportunities, universal accessibility for people with disabilities, solidarity, environmental protection, the culture of peace and democratic values.
- Promote and evaluate the acquisition of enduring and autonomous habits of practising physical activity and sport.
- Plan, implement and evaluate physical activity and sports programmes targeted at special populations.
- Identify health risks derived from inappropriate physical and sporting activities and propose alternatives.
- Evaluate physical fitness and prescribe health-oriented physical exercises.
- Develop habits of professional excellence and quality.
- Know and understand the behavioural, social and legal factors that determine the practice of adapted physical activity.
- Know and understand the effects of the practice of physical exercise on the psychological and social dimensions of people with disabilities.
- Plan, implement and evaluate physical activity and sports programmes targeted at people with disabilities.



- Promote and evaluate the acquisition of enduring and autonomous habits of practising physical activity in people with disabilities.
- Identify health risks in the practice of physical activity and sports in people with disabilities.
- Select and know how to use sports material and equipment suitable for people with disabilities.
- Build habits of professional excellence and quality in the area of adapted physical activity.
- Apply the fundamental rights of equal opportunities and universal accessibility for people with disabilities.
- Prescribe physical exercise programmes for populations with special needs to improve and/or maintain their quality of life based on its determinants and on a comprehensive model for building healthy habits.
- Know the different areas of competence and the environments for promoting adapted physical activity to improve quality of life.
- Use the sources of certified scientific knowledge in the field of physical activity sciences applied to the maintenance of the quality of life.
- Develop capacities to operate according to the principles of excellence and ethics in the field of physical activity for the improvement of the quality of life.
- Develop appropriate skills for individual and group work in the field of physical activity for the improvement of the quality of life.

It is expected that students know the basics to ensure the proper prescription and application of Physical Activity for People with Special Needs. To achieve this requirement, the students should know how to analyze, select, adapt and devise different methods, programs, activities and physical /sports exercises according to the interests, abilities and skills of different people, meeting their diverse needs, difficulties, shortcomings and/or disabilities.

DESCRIPTION OF CONTENTS

1. Conceptualization about exercise for people with special needs applied to improving quality of life.

Retrospective and prospective analysis of adapted physical activity.

Legal criteria and areas of performance for the Bachelor of Science in Physical Activity and Sport.

2. Prescription of physical exercise and healthy habits recommendations.

People with metabolic syndrome.

Obesity, hypertension, type 2 diabetes mellitus, and dyslipidemia. Consulting applied in nutrition habits.

People with lung disease.

For example: asthma and chronic obstructive pulmonary disease.

People with musculoskeletal disorders.



For example: rheumatoid arthritis, osteoarthritis and knee pain and lower back.

People with mental disorders.

For example: muscle dysmorphia, depression and stress.

Other special groups.

For example: extreme poverty, immigration and prison inmates.

3. Adapted physical activity on disability.

Regulatory framework, classification of disability, definitions and terminology.

Basic guidelines for adapted prescription programs of physical activity, exercise and sports on disabled people.

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	45,00	100
Classroom practices	15,00	100
Attendance at events and external activities	10,00	0
Development of group work	20,00	0
Study and independent work	20,00	0
Readings supplementary material	10,00	0
Preparation of evaluation activities	10,00	0
Preparing lectures	5,00	0
Preparation of practical classes and problem	5,00	0
Resolution of case studies	10,00	0
TOTAL	150,00	

TEACHING METHODOLOGY

The subject will be taught in conjunction and coordination with the various subjects from this module.

The theoretical content of the topics will be showed in class through classroom activities, using documentary sources of highest scientific rigor and recently updated (both in Spanish and English). These classes serve to fix the knowledge associated with the established capabilities. In addition, in the practical classes some of these contents will be experienced with the immersion method developing new knowledge applied, being used as a whole for that purpose all technological and procedural means as may be appropriate.

From these theoretical and practical classes, in those content that teachers deem necessary may propose to learners performing certain theoretical and practical personal or group work, if this will be the case, for whose implementation they will have the support of the teacher in supervised sessions where students can share with peers and the teacher doubts, get solution to them and begin to independently to develop the skills of the module.



In addition to achieve competencies in a more meaningful way, students will have to develop an individual work of study and assimilation of the theoretical and practical knowledge, and to prepare possible proposed works, it is also recommended to attend complementarily to an academic act and / or practical that can complement and / or reinforce the contents in the subject.

In direct connection with the contents of the subject, throughout its development, 2 consecutive practical sessions could be carried out in a pool, to be specified, that each subgroup of practices must carry out at the place and date that at the beginning of each academic year will be indicated by the teachers both in class and in the virtual classroom. During these practices, students should wear normal pool clothing and respect its rules of use .

EVALUATION

Subject evaluation system

To evaluate the acquisition of the final competences, the students must carry out:

- (a) A theoretical final exam on all the contents developed in the subject. It will be a test type exam to choose in each question among different answer options. The theoretical exam will have a value of 60% of the final grade and must be compulsorily passed with a note of 5 out of 10 points to be able to mediate with the rest of the marks of the subject and thus choose to pass it.
- (b) Obligatory group presentation in written and oral form of a final expository work in group, its value will correspond to 25% of the final grade, that is to say, it will be able to score up to 2.5 points, having to reach at least 1.75 points to be considered adequate (apt). If you are not adequate (apt), you will not be able to pass the course. The oral presentation will be compulsory for all members of the group.
- (c) Throughout the development of the subject, the teaching staff may request the delivery of some workshops for the practical application of content as a result of the experience of the theoretical and or practical sessions of the subject, its value will correspond to 15% of the final grade, teachers will indicate the percentage that each of them represents with respect to this 15%. These workshops will be compulsory delivery and will be qualified over 10 points, each of which must have a minimum score of 5 points to have them approved and with this to have the option to pass the course.
- (d) The overcoming of the quota of absences marked by the university for the practical part of the subject (>20%) will suppose, in addition to the overcoming of the rest of the previously marked criteria (a, b, c), the additional delivery of compensatory written works of each session that exceeds the quota of absences allowed, that according to the student's casuistry of absences will be determined by the teacher and that they will be delivered with deadline until the day of the final theoretical exam. These works will be of individual development and they will be linked to the activities of the sessions that the student does not attend. These works will be compulsory and will be classified as suitable (apt) or unsuitable, having to have the grade of "apt" to have the option to pass the course. The grade of "apt" will be achieved as long as all the formal requirements that the teaching staff will determine in writing for its development in each case are met.



If a student fails and must attend the second call, the qualifications of what he/she has had approved in the first call of that academic year will be "saved". If the student fails the subject on the second call, no grade from that academic year will be "saved" for subsequent academic years, in which they must retake it with all the requirements requested in order to pass it.

Additionally, and due to the imperative of the department, students must be warned of the following issues:

The literal copy, total or partial, of other people's works presenting them as their own is considered unacceptable behavior in the academic field. On the other hand, and by the Law of Intellectual Protection, the total or partial reproductions of the works of others are usually prohibited, and their non-compliance may lead to the corresponding offenses or criminal offenses.

REFERENCES

Basic

- Ainsworth BE, Haskell WL, Whitt MC, et al. Compendium of physical activities: an update of activity codes and MET intensities. *Med Sci Sports Exerc.* 2000 Sep;32(9 Suppl):S498-504.
- Ainsworth BE, Haskell WL, Herrmann SD, et al. 2011 Compendium of Physical Activities: a second update of codes and MET values. *Med Sci Sports Exerc.* 2011 Aug;43(8):1575-81.
- Albright A, Franz M, Hornsby G, et al. American College of Sports Medicine position stand. Exercise and type 2 diabetes. *Med Sci Sports Exerc.* 2000 Jul;32(7):1345-60.
- American College of Sports Medicine (ACSM). AHA/ACSM Joint position statement: Recommendations for cardiovascular screening, staffing, and emergency policies at health/fitness facilities. *Med. Sci. Sports Exerc.* 1998; 30 (6): 1009-1018.
- Colegio Americano del Medicina del Deporte (ACSM). (2014) Manual ACSM para la valoración y prescripción del ejercicio. 3ª ed. Barcelona: Paidotribo.
- Donnelly JE, Blair SN, Jakicic JM, et al. American College of Sports Medicine Position Stand. Appropriate physical activity intervention strategies for weight loss and prevention of weight regain for adults. *Med Sci Sports Exerc.* 2009 Feb;41(2):459-71.
- Gaspar, R., Padula, N., Freitas, T. B., de Oliveira, J. P., & Torriani-Pasin, C. (2019). Physical exercise for individuals with spinal cord injury: systematic review based on the international classification of functioning, disability, and health. *Journal of sport rehabilitation*, 28(5), 505-516.
- Grundy SM, Cleeman JI, Daniels SR, et al. Diagnosis and management of the metabolic syndrome: an American Heart Association/National Heart, Lung, and Blood Institute Scientific Statement. *Circulation.* 2005 Oct 25;112(17):2735-52.
- Horvat M, Block M, Kelly L. (2007) Developmental and adapted physical activity assessment. Champaign, IL: Human Kinetics.
- López J, López LM. (2008) Fisiología Clínica del Ejercicio. Madrid: Panamericana.
- Melmer, A., Kempf, P., & Laimer, M. (2018). The role of physical exercise in obesity and diabetes. *Praxis*, 107(17-18), 971-976.



- Mitchell L, Murray SB, Cobley S, et al. Muscle Dysmorphia Symptomatology and Associated Psychological Features in Bodybuilders and Non-Bodybuilder Resistance Trainers: A Systematic Review and Meta-Analysis. *Sports Med.* 2016 May 31. [Epub ahead of print]
- Miller MG, Weiler JM, Baker R, Collins J, D'Alonzo G. National Athletic Trainers' Association position statement: management of asthma in athletes. *J Athl Train.* 2005 Jul-Sep;40(3):224-45.
- Nash MS, Jacobs PL, Woods JM, Clark JE, Pray TA, Pumarejo AE. A comparison of 2 circuit exercise training techniques for eliciting matched metabolic responses in persons with paraplegia. *Arch Phys Med Rehabil.* 2002 Feb;83(2):201-9.
- Pescatello LS, MacDonald HV, Lamberti L, Johnson BT. Exercise for Hypertension: A Prescription Update Integrating Existing Recommendations with Emerging Research. *Curr Hypertens Rep.* 2015 Nov;17(11):87.
- -Pedersen BK, Saltin B. Exercise as medicine - evidence for prescribing exercise as therapy in 26 different chronic diseases. *Scand J Med Sci Sports.* 2015 Dec;25 Suppl 3:1-72.
- Reina R. (2010) *La actividad física y el deporte adaptado en el espacio europeo de enseñanza superior.* Barcelona: Paidotribo.
- Rot M, Collins KA, Fitterling HL. Physical exercise and depression. *Mt Sinai J Med.* 2009 Apr;76(2):204-14.
- Verschuren, O., Peterson, M. D., Balemans, A. C., & Hurvitz, E. A. (2016) Exercise and physical activity recommendations for people with cerebral palsy. *Developmental Medicine & Child Neurology,* 58(8), 798-808.
- Winnick J. (2011) *Adapted Physical Education and Sports.* Champaign, IL: Human Kinetics.
- Zwinkels M, Verschuren O, Janssen TW, et al. Exercise training programs to improve hand rim wheelchair propulsion capacity: a systematic review. *Clin Rehabil.* 2014 Sep;28(9):847-61.

Additional

- Brandt M, Sundstrup E, Jakobsen MD, Jay K, Colado JC, Wang Y, Zebis MK, Andersen LL. Association between Neck/Shoulder Pain and Trapezius Muscle Tenderness in Office Workers. *Pain Res Treat.* 2014;2014:352735.
- Cabeza-Ruiz R, García-Massó X, Centeno-Prada RA, Beas-Jiménez JD, Colado JC, González LM. Time and frequency analysis of the static balance in young adults with Down syndrome. *Gait Posture.* 2011 Jan;33(1):23-8.
- Colado JC, Garcia-Masso X, Rogers ME, Tella V, Benavent J, Dantas EH. Effects of aquatic and dry land resistance training devices on body composition and physical capacity in postmenopausal women. *J Hum Kinet.* 2012 May;32:185-95.
- Colado JC, Triplett NT, Tella V, Saucedo P, Abellán J. Effects of aquatic resistance training on health and fitness in postmenopausal women. *Eur J Appl Physiol.* 2009 May;106(1):113-22.
- Jacobs, P. L. (2017). *NSCA's essentials of training special populations.* Human Kinetics.
- Lidegaard M, Jensen RB, Andersen CH, Zebis MK, Colado JC, Wang Y, Heilskov-Hansen T, Andersen LL. Effect of brief daily resistance training on occupational neck/shoulder muscle activity in office workers with chronic pain: randomized controlled trial. *Biomed Res Int.* 2013;2013:262386.
- Moya-Nájera D, Borreani S, Moya-Herraz Á, Calatayud J, López-Andújar R, Colado JC. Is physical exercise harmful to liver transplantation recipients? Review of literature. *Cir Esp.* 2016 Jan;94(1):4-10.