

ACADEMY OF SPORTS SCIENCES RESEARCH AND MANAGEMENT

Department of Sports Science (DPSRU)

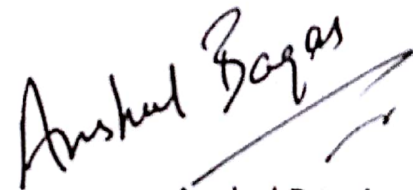
ASSRM/BSS/2/2018/002

Dated: 23/05/2018

Sports Nutrition & Biochemistry (Theory & Practical) Syllabus notification

As per discussion with VC Sir and evaluating the scenario, we have arrived at the below solution:

“BSS 203: Sport and Exercise Nutrition and Bio-Chemistry” course has been revised and the Unit 1,2, 3 and 4 have been finalised for Semester 2 examination. Unit-5 has been moved to semester-3 under the subject Sport & Exercise Physiology and Bio-chemistry as per the advice of Dr. D.K. Kansal, so that the students don't lose out knowledge of the Unit-5. Practical syllabus has also been revised as per the attachment.



Anshul Bagai
Director
ASSRM

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1. Faculty Members
2. Chief Admin Officer
3. Notice Board

REVISED SYLLABUS SEMESTER-II

BSS 203: Sport and Exercise Nutrition and Bio-Chemistry

Maximum Marks= 60 Marks

Time Allowed = 3 Hrs

UNIT-I

Introduction to basic concepts in nutrition- Nutrients of Physiological significance & their functions, sources of food and requirements in normal health conditions, Nutritional Requirements for sports and exercising person.

UNIT-II

Energy metabolism- BMR, RMR, energy expended on physical activity, Energy requirements of specific sports groups, Energy cost of activities, Energy substrate for activities of different intensity and duration; aerobic and anaerobic, Concept of energy balance in maintaining weight chronic dieting and eating disorder, Female athletic triad, sports anemia, nutrient as ergogenic aids for sports and exercise, Diet prescription for various sports group.

Unit-III

Planning balanced meal, Basic food groups, Concept of balanced diet, General and specify dietary guidelines in planning meals for children, adolescents , adult men and women and elderly. Nutritional considerations for sports/exercising persons (endurance and strength sports/ exercise training) as compared to normal, active person meals during training, pre competition meal, during event and post competition meal.

Unit –IV

CARBOHYDRATES: Definition , classification with examples and general functions. Diabetes and diabetic keto-acidosis.

LIPIDS: Definition, classification and general functions. Essential fatty acids, cholesterol, Blood lipids Brief review of lipoproteins.

Proteins: Definitions, Classifications and Bio-medical Importance. Plasma proteins and functions.

Metabolism of Proteins: General reactions of amino acids. Formation and fate of ammonia-Urea cycle.

Suggested Books:

- Bean, A. and P. Wellington (2017). The complete Guide to Sports Nutrition. Bloomsbury Sport Publishing Company, London, U.K.
- Eberle, S.G. and S.G. Eberle (2007). Enduranc Sports Nutrition. Human Kinetics Publishers, Urbana Champain, Illinois, USA.
- Harper’s Illustrated Biochemistry, Murray, rober K, Granny Daryl
- Karpinski, C. (2017). Sports Nutrition. Academy of Nutrition and dietetics, Chicago, Illinois, USA.
- Lehninger Principle of Biochemistry, nelson, David L and Michael M Lox.
- Shinde. C.F. (2005) Text book of Medical Biochemistry
- W. Redwell, K.P . Mayes, Peter A & Victor or Biochemistry for students, V.K. Malhotra.
- Wolf,R. (2010). The Paleo Solution: The Original Human Diet. Victory Belt Publishing, Las Vegas, California, USA. ISBN: 0-9825658-44.

SEMESTER II

BSS 207: Sports and Exercise Nutrition and Bio-Chemistry (P)

Maximum Marks= 30 Marks

Time Allowed = 3 Hrs

1. Meal planning for regular training – endurance and strength sports activities.
2. Planning a carbohydrate rich snack/meal.
3. Planning a protein rich snack/meal.
4. Planning Pre- event meal and liquid meal.
5. Planning post-event meal, high energy meal.
6. Planning diet for weight gain and weight loss.

SUGGESTED BOOKS:

- Antoni, J. et al, Editors (2008). Essentials of Sports Nutrition and Supplements. Humana Press, USA.
- Benardot, D. (2005). Advanced Sports Nutrition. Human Kinetics. USA.
- Brown Judith E (2002) Nutrition now Canada Pub. Peter Marshal.
- Caliendo Mang Alica (1981). Nutrition and preventive health care Mcemillin Publication Co.
- Clark, N. (2008). Sports Nutrition. 4th Ed. Human Kinetics, USA.
- Eberle, S.G. (2007). Endurance Sports Nutrition. Human Kinetics, USA.
- Hoeger, WWK and S.A.Hoeger (2007). Fitness and Wellness. Thomson-Wadsorth, Belmont, California, USA.
- Gleeson, M. (2013). Biochemistry of Exercise, in the Encyclopedia of Sports Medicine: An IOC Medical Commission Publication, Volume 19 (Editor: R.J. Manghan), John Wiley & Sons Ltd., Chi Chester, U.K.
- Manghan, R.J. and M. Gleeson (2010). The biochemical basis of sports performance, Oxford University Press, New York, USA.