

FOODS & NUTRITION 2241B - Sec 531
NUTRITION THROUGHOUT THE HUMAN LIFE CYCLE

COURSE OUTLINE

Dr. Jamie Seabrook

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COURSE DESCRIPTION:

A study of nutritional requirements from conception to old age.

CLASS SCHEDULE:

Section 531 – Thursday 10:00 AM – 1:00 PM in St. James building, Room 303

PREREQUISITES: Chemistry 213A/B, and Foods and Nutrition 1030E or the former Foods and Nutrition 2235A/B or Foods and Nutrition 1021 or Foods and Nutrition 2121

OBJECTIVES: At the end of the course, the students will be able to:

1. Explain how nutrition influences humans and contributes to their health throughout each stage of life.
2. Identify, for every stage of the life span, the characteristics of normal growth and development, the energy and nutrient requirements to support health, as well as the various nutrition-related aspects and concerns.
3. Demonstrate an understanding of the relationship of chemistry, biochemistry, physiology and microbiology to the biological utilization of food and its nutrient components.
4. Understand the relationship of biological utilization of foods to nutritional status.
5. Understand the factors that determine nutritional needs and the utilization of foods throughout the life cycle.
6. Recommend practical food choices appropriate for different age groups, taking into consideration the influence of the psychological, political, social, cultural and economic factors on food consumption.

7. Be aware of the main credible sources of public health nutrition information and recommendations in Canada.
8. Explore nutrition-related Web sites on the Internet, and be critical about the credibility of their information.
9. Develop critical thinking, teamwork and communication skills.

FORMAT:

- Three hours of lecture per week, plus supplementary readings and exercises assigned.
- Students will be graded on a case study assignment, two exams, and in-class assignments.
- An interactive approach to learning will include individual and group work, workshops and class discussions.

REQUIRED TEXTS:

Brown, J.E. 2014. Nutrition Through the Life Cycle. 5th edition. Wadsworth / Nelson Thomson Learning, Toronto, Ontario.

OTHER RECOMMENDED REFERENCES: (most of them are available at Brescia Library)

- American Dietetic Association. 2005. "Position Paper of the American Dietetic Association: Nutrition Across the Spectrum of Aging." *Journal of the American Association*. 105 (4) 616-633.
- American Dietetic Association and Dietitians of Canada. 2004. "Position of the American Dietetic Association and Dietitians of Canada: Nutrition and Women's Health." *Journal of the American Dietetic Association*. 104 (6) 984-1001.
- American Dietetic Association and Dietitians of Canada. 2000. "Lifecycle Nutrition" Section of the Manual of Clinical Dietetics. 6th Edition. American Dietetic Association, Chicago, Illinois, pp. 69-176.
- American Dietetic Association. 2002. "Position of the American Dietetic Association: Nutrition and lifestyle for a healthy pregnancy outcome." *Journal of the American Dietetic Association*. 102 (10) 1479-1490.
- Bales, C.W. and C.S. Ritchie. 2004. Handbook of Clinical Nutrition and Aging. Humana Press, Totowa, NJ.
- Boyle, M.A. 2003. Community Nutrition in Action. An Entrepreneurial Approach. 3rd Edition. Thomson Learning/Wadsworth/Nelson, Toronto, Ontario.

- Brown, J.E. 2005. Nutrition Now. 4th Edition. Wadsworth Publishing, Thompson Learning, Belmont, CA.
- Canadian Institute for Health Information. 2004. Improving the Health of Canadians. Canadian Institute for Health Information, Ottawa, Ontario. (This document and its Summary Report are available online at www.cihi.ca)
- Canadian Paediatric Society, Dietitians of Canada, and Health Canada. 1998. Nutrition for Healthy Term Infants. Minister of Public Works and Government Services, Ottawa, Ontario.*
- Cavanaugh, J.C., and F. Blanchard-Fields. 2002. Adult Development and Aging. 4th Edition, Wadsworth / Thomson Learning, Belmont, CA.
- Chernoff, R. 2006. Geriatric Nutrition. The Health Professional's Handbook. 3rd Edition, Jones and Bartlett Publishers, Sudbury, MA.
- Dietitians of Canada. PEN: Practice-based Evidence in Nutrition. Online resource. (<http://www.dietitians.ca>).
- Dietitians of Canada. 2003. The Dietitians of Canada and Dairy Farmers of Canada 2004 Report on Healthy Eating for School Age Children. Dietitians of Canada, Toronto, Ontario. (Available online for Dietitians of Canada members at www.dietitians.ca/members_only/nutritionmonth.asp)
- Dietitians of Canada, and H. Keller. 2003. Bringing Nutrition Screening to Seniors. Community Implementation Guide. Dietitians of Canada, Toronto, Ontario.
- Dietitians of Canada, Canadian Paediatric Society, The College of Family Physicians of Canada, and Community Health Nurses Association of Canada. 2004. "The Use of Growth Charts for Assessing and Monitoring Growth in Canadian Infants and Children." *Canadian Journal of Dietetic Practice and Research*. 65, 22-32.
- Dunford, M., Editor. Sports, Cardiovascular and Wellness Nutritionists Dietetic Practice Group. 2006. Sports Nutrition. A Practice Manual for Professionals. 4th Edition. American Dietetic Association, Chicago, Illinois.
- Endres, J., R.E. Rockwell, and C. Mense. 2004. Food, Nutrition, and the Young Child. 5th Edition, Prentice Hall, Englewood Cliffs, New Jersey.
- Federal, Provincial and Territorial Advisory Committee on Population Health. 1999. Toward a Healthy Future. Second Report on the Health of Canadians. Publications, Health Canada, Ottawa, Ontario.*
- Fiatarone Singh, M.A., Editor. 2000. Exercise, Nutrition, and the Older Woman. Wellness for Women Over Fifty. CRC Press, Boca Raton, Florida.

- Fox, M.K., B. Devaney, K. Reidy, C. Razafindrakoto, and P. Zeigler. 2006. "Relations between Portion Size and Energy Intake among Infants and Toddlers: Evidence of Self-Regulation." *Journal of the American Dietetic Association*. 106, S77-S83.
- Health Canada. 2007. Eating Well with Canada's Food Guide. A Resource for Educators and Communicators. Health Canada, Ottawa, Ontario. *
- Health Canada. 1999. Nutrition for a Healthy Pregnancy: National Guidelines for the Childbearing Years. Minister of Public Works and Government Services Canada, Ottawa, Ontario.*
- Health Canada. 2000. CPNP: A Portrait of Participants. Minister of Public Works and Government Services Canada, Ottawa, Ontario.* (Available online at <http://www.hc-sc.gc/hppb/childhood-youth/cbp.cpnnp/>)
- Health Canada. 2002. Canada's Physical Activity Guide for Children. Minister of Public Works and Government Services Canada, Ottawa, Ontario.
- Health Canada. 2002. Canada's Physical Activity Guide for Youth. Minister of Public Works and Government Services Canada, Ottawa, Ontario. (Available online at <http://www.healthcanada.ca/paguide>)
- Health Canada. 2003. Canadian Guidelines for Body Weight Classification in Adults. Health Canada Publications Centre, Ottawa, Canada. (Available at <http://www.healthcanada.ca/nutrition>).
- Institute of Medicine of the National Academies. 1997. Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride. The National Academies Press, Washington, D.C. (and other DRI publications available for consultation at <http://www.nap.edu>)
- Institute of Medicine of the National Academies. 1998. Dietary Reference Intakes: Proposed Definition and Plan for Review of Dietary Antioxidants and Related Compounds. The National Academies Press, Washington, D.C.
- Institute of Medicine of the National Academies. 2000a. Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline. The National Academies Press, Washington, D.C.
- Institute of Medicine of the National Academies. 2000b. Dietary Reference Intakes: Applications in Dietary Assessment. The National Academies Press, Washington, D.C.
- Institute of Medicine of the National Academies. 2000c. Dietary Reference Intakes for Vitamin C, Vitamin E, Selenium, and Carotenoids. The National Academies Press, Washington, D.C.
- Institute of Medicine of the National Academies. 2001a. Dietary Reference Intakes: Proposed Definition of Dietary Fiber. The National Academies Press, Washington, D.C.

- Institute of Medicine of the National Academies. 2001b. Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc. The National Academies Press, Washington, D.C.
- Institute of Medicine of the National Academies. 2003a. Dietary Reference Intakes: Applications in Dietary Planning. The National Academies Press, Washington, D.C.
- Institute of Medicine of the National Academies. 2003b. Dietary Reference Intakes: Guiding Principles for Nutrition Labeling and Fortification. The National Academies Press, Washington, D.C.
- Institute of Medicine of the National Academies. 2004. Dietary Reference Intakes: Water, Potassium, Sodium, Chloride, and Sulfate. Prepublication copy, The National Academies Press, Washington, D.C.
- Institute of Medicine of the National Academies. 2005. Dietary Reference Intakes: Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids (Macronutrients). The National Academies Press, Washington, D.C.
- Institute of Medicine of the National Academies Committee on the Scientific Evaluation of Dietary Reference Intakes. 2006. Dietary Reference Intakes: The Essential Reference for Dietary Planning and Assessment. The National Academies Press, Washington, D.C.
- Kalnins, D., and J. Saab. 2001. The Hospital for Sick Children Better Baby Food. Robert Rose, Toronto, Ontario.
- Kalnins, D. and J. Saab. 2002. Better Food for Kids. Robert Rose, Toronto, Ontario.
- Kalnins, D. and J. Saab. 2006. Better Food for Pregnancy. Robert Rose, Toronto, Ontario.
- Kramer-Atwood, J.L., J. Dwyer, D.M. Hoelscher, T.A. Nicklas, R.K. Johnson, and G.K. Schulz. 2002. "Fostering healthy food consumption in schools: Focussing on the challenges of competitive foods." *Journal of the American Dietetic Association*. Vol. 102, No. 9, pp. 1228-1233.
- Lutz, C.A. and K.R. Przytulski. 2006. Nutrition and Diet Therapy: Evidence-Based Applications. 4th Edition. F.A. Davis Company, Philadelphia, PA.
- Lynn, S., and D. Mizumoto. 1999. Breastfeeding: Nature's Best for You and Your Baby. The American Dietetic Association, Chicago, Illinois.
- Mahan, L.K. and S. Escott-Stump, Editors. 2008. Krause's Food & Nutrition Therapy. 12th Edition. W.B. Saunders Company, Philadelphia, PA.
- Mehrotra, C.M. and L.S. Wagner. 2006. Aging and Diversity. 2nd Edition, Taylor and Francis, Bristol, PA.

- Middlesex-London Health Unit. 2000. Toddler Healthy Eating Guide. Middlesex-London Health Unit, London, Ontario. (Available online at www.healthunit.com)
- Middlesex-London Health Unit. 2000. Preschool Healthy Eating Guide. Middlesex-London Health Unit, London, Ontario. (Available online at www.healthunit.com)
- Mitchell, M.K. 2003. "Aging and Older Adults." Chap. 13 in: Nutrition Across the Life Span. 2nd Edition, Saunders, Elsevier, Philadelphia, PA, pp. 429-470.
- Nix, S. 2005. Williams' Basic Nutrition & Diet Therapy. 12th Edition. Mosby Inc., Elsevier Science, St. Louis, Missouri.
- Ontario Society of Nutrition Professionals in Public Health School Nutrition Workgroup Steering Committee. 2004. Call to Action: Creating a Healthy School Nutrition Environment. Ontario Society of Nutrition Professionals in Public Health, Ontario Public Health Association, Toronto, Ontario. (Available online at www.osnp-ph.on.ca)
- Papalia, D.E., H. Sterns, R.D. Feldman, and C. Camp. 2007. Adult Development and Aging. McGraw-Hill, New York.
- Peckenpaugh, N.J. 2007. Nutrition Essentials and Diet Therapy. 10th Edition. Saunders Elsevier, St. Louis, Missouri.
- Rolfes, S.R., K. Pinna, and E.N. Whitney. 2006. Understanding Normal and Clinical Nutrition. 7th Edition. Wadsworth Publishing, Thomson Learning, Belmont, CA.
- Shield, J. and M.C. Mullen. 2002. ADA Guide to Healthy Eating for Kids: How Your Children Can Eat Smart from 5 to 12. The American Dietetic Association, Chicago, Illinois.
- Shils, M.E., M. Shike, A.C. Ross, B. Caballero, and R.J. Cousins, Editors. 2006. Modern Nutrition in Health and Disease. 10th Edition. Lippincott, Williams & Wilkins, New York, New York.
- Thompson, J. and M. Manore. 2006. Nutrition: An Applied Approach. Pearson Education Inc., Benjamin Cummings, San Francisco, CA.
- Wardlaw, G.M. and A.M. Smith. 2007. Contemporary Nutrition. 6th Edition. McGraw-Hill Ryerson Ltd, New York, NY.
- Whitney, E. and S.R. Rolfes. 2005. Understanding Nutrition. 10th Edition. Wadsworth, Thomson Learning, Belmont, CA.
- Wildman, R., and B. Miller. 2004. Sports and Fitness Nutrition. Thomson Learning/Wadsworth/Nelson, Toronto, Ontario.

- World Health Organization. 2003. Diet, Nutrition and the Prevention of Chronic Diseases. Report of a Joint WHO/FAO Expert Consultation. WHO Technical Report Series #916, World Health Organization, Geneva, Switzerland.
- World Health Organization's Child Growth Standards: www.who.int/childgrowth
- Worthington B.S., and S. Rodwell Williams. 2000. Nutrition Throughout The Life Cycle. 4rd Edition. Mosby, Toronto, Ontario.
- * Publications available online at <http://www.hc-sc.gc.ca>

Note: Other interesting reference books are also available at the Brescia University College library. You are strongly encouraged to consult them. Many of these books will be mentioned throughout the course lectures. A copy of the texts assigned for reading will be placed on library reserve for consultation.

EVALUATION:

<ul style="list-style-type: none"> • Case study assignment Assignment done in a group of three or four students. • Mid-term exam Will include the material covered in class and the assigned readings and exercises for the lectures 1 to 7 inclusively. • Final exam This exam will include material covered in class and the assigned reading and exercises after the mid-term exam. 	<p>20%</p> <p>40%</p> <p>40%</p> <hr style="width: 100%;"/> <p>100%</p>
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DIVISIONAL POLICIES:

Participation/Attendance: Everyone enrolled in the course is expected to participate in class discussions. Attendance at class and laboratory is mandatory. Students who have not attended at least 75% of the lectures will not be able to write the final exam.

Penalty for late assignments: Assignments are due at class time on the date specified. There will be a deduction of 20% of the value of the assignment for late submission. NO assignment will be accepted one (1) week after due date, except in cases with proper documentation to show a confirmed personal illness or a death in the student's immediate family.

Special examination: NO special examination will be given for a student who has missed a scheduled examination except in cases with proper documentation to show a confirmed personal illness or a death in the student's immediate family.

Note: Participation and attendance in this course are evaluated through in-class assignments. For this reason, missed in-class assignments will not be re-scheduled. However, a student with proper documentation of a confirmed personal illness or a death in the student's immediate family will be excused.

Up to 10% of marks on each assignment and examination can be deducted for lack of proper English communication skills, including errors in spelling or grammar.

TENTATIVE SCHEDULE OF LECTURES AND TOPICS:

Lecture 1: Classes begin the week of January 4, 2016 (full lecture)

- Course outline
- Explanation of the Case Study Assignment
- Introduction (Chap. 1)

Lecture 2:

- Preconception Nutrition (Chap. 2)

Lecture 3:

- Nutrition during Pregnancy (Chap. 4)

Lecture 4:

- Nutrition during Pregnancy (ctd) (Chap. 4)

Lecture 5:

- Nutrition during Lactation (Chap. 6)

Lecture 6:

- Infant Nutrition (Chap. 8)

Reading week: February 15 to 19 – NO LECTURE

Lecture 7:

- Infant Nutrition (ctd) (Chap. 8)

MID-TERM EXAMINATION – SATURDAY MARCH 5th, 2015 - 9:00AM-12:00PM IN Location TBA

Lecture 8:

- Toddler and Preschooler Nutrition (Chap. 10)

Lecture 9:

- Toddler and Preschooler Nutrition (ctd) (Chap. 10)

Lecture 10:

- Child and Preadolescent Nutrition (Chap. 12)

Lecture 11:

- Child and Preadolescent Nutrition (ctd) (Chap. 12)
- Adolescent Nutrition (Chap. 14)

Lecture 12:

- Adolescent Nutrition (ctd) (Chap. 14)
- Adult Nutrition (Chap. 16)

Lecture 13:

- Nutrition and the Elderly (Chap. 18)

FINAL EXAM

- Final examination period April 9-30, 2016. Please see final exam schedule.

BRESCIA UNIVERSITY COLLEGE ACADEMIC POLICIES AND REGULATIONS**1. POLICY REGARDING MAKEUP EXAMS AND EXTENSIONS OF DEADLINES**

When a student requests academic accommodation (e.g., extension of a deadline, a makeup exam) for work representing 10% or more of the student's overall grade in the course, it is the responsibility of the student to provide acceptable documentation to support a medical or compassionate claim. All such requests for academic accommodation **must** be made through an Academic Advisor and include supporting documentation. Academic accommodation on medical grounds will be granted only if the documentation indicates that the onset, duration and severity of the illness are such that the student could not reasonably be expected to complete her academic responsibilities. Appropriate academic accommodation will be determined by the Dean's Office in consultation with the student's instructor(s). Please note that personal commitments (e.g., vacation flight bookings, work schedule) which conflict with a scheduled test, exam or course requirement are not grounds for academic accommodation.

A UWO Student Medical Certificate (SMC) is **required** if a student is seeking academic accommodation on medical grounds. This documentation should be obtained at the time of the initial consultation with the physician/nurse practitioner or walk-in clinic. A SMC can be downloaded under the Medical Documentation heading of the following website:

<https://studentservices.uwo.ca/secure/index.cfm> . If it is not possible to have an SMC completed by the attending physician/nurse practitioner, the student must request documentation sufficient to demonstrate that her ability to meet academic responsibilities was seriously affected. Please note that under University Senate regulations documentation stating simply that the student "was seen for a medical reason" or "was ill" is **not** adequate to support a request for academic accommodation. All documentation is to be submitted to an Academic Advisor.

Whenever possible, requests for academic accommodation should be initiated in advance of due dates, examination dates, etc. Students must follow up with their professors and Academic Advisor in a timely manner.

The full statement of University policy regarding extensions of deadlines or makeup exams can be found at <http://www.westerncalendar.uwo.ca/2015/pg117.html>

2. ACADEMIC CONCERNS

If you feel that you have a medical or personal problem that is interfering with your work, contact your instructor and Academic Advisor as soon as possible. Problems may then be documented and possible arrangements to assist you can be discussed at the time of occurrence rather than on a retroactive basis. Retroactive requests for academic accommodation on medical or compassionate grounds may not be considered.

If you think that you are too far behind to catch up or that your work load is not manageable, you should consult an Academic Advisor. If you consider reducing your workload by dropping one or more courses, this must be done by the appropriate deadlines (refer to the Registrar's website, www.registrar.uwo.ca, for official dates). You should consult with the course instructor and the Academic Advisor who can help you consider alternatives to dropping one or more courses. *Note that dropping a course may affect OSAP eligibility and/or Entrance Scholarship eligibility.*

The Dean may refuse permission to write the final examination in a course if the student has failed to maintain satisfactory academic standing throughout the year or for too frequent absence from the class or laboratory.

3. ABSENCES

Short Absences: If you miss a class due to a minor illness or other problems, check your course outline for information regarding attendance requirements and make sure you are not missing a test or assignment. Cover any readings and arrange to borrow notes from a classmate. Contact the course instructor if you have any questions.

Extended Absences: If you have an extended absence, you should contact the course instructor and an Academic Advisor. Your course instructor and Academic Advisor can discuss ways for you to catch up on missed work and arrange academic accommodations, if appropriate.

4. POLICY ON CHEATING & ACADEMIC MISCONDUCT

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offences. Students are urged to read the section on Scholastic Offences in the Academic Calendar. Note that such offences include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course in the University or elsewhere. Students are advised to consult the section on Academic Misconduct in the Western Academic Calendar.

If you are in doubt about whether what you are doing is inappropriate or not, consult your instructor, the Student Services Centre, or the Registrar. A claim that "you didn't know it was wrong" is not accepted as an excuse.

The penalties for a student guilty of a scholastic offence (including plagiarism) include refusal of a passing grade in the assignment, refusal of a passing grade in the course, suspension from the University, and expulsion from the University.

Plagiarism:

Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the Western Academic Calendar).

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com.

Computer-marked Tests/exams:

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating. Software currently in use to score computer-marked multiple-choice tests and exams performs a similarity review as part of standard exam analysis.

5. PROCEDURES FOR APPEALING ACADEMIC EVALUATIONS

All appeals of a grade must be directed first to the course instructor. If the student is not satisfied with the decision of the course instructor, a written appeal signed by the student must be sent to the Department Chair. If the response of the department is considered unsatisfactory to the student, she may then submit a signed, written appeal to the Office of the Dean. Only after receiving a final decision from the Dean may a student appeal to the Senate Review Board Academic. A Guide to Appeals is available from the Ombudsperson's Office, or you can consult an Academic Advisor. Students are advised to consult the section on Academic Rights and Responsibilities in the Western Academic Calendar.

6. PREREQUISITES AND ANTIREQUISITES

Unless you have either the prerequisites for a course or written special permission from your Dean to enroll in it, you will be removed from the course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Similarly, you will also be deleted from a class list if you have previously taken an antirequisite course unless this has the approval of the Dean. These decisions may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course because you have taken an antirequisite course.

7. SUPPORT SERVICES

The Brescia University College Registrar's website, with a link to Academic Advisors, is at <http://brescia.uwo.ca/academics/registrar-services/>. The Western Registrar's website is at <http://www.registrar.uwo.ca/index.html>. The website for the Student Development Centre at Western is at <http://www.sdc.uwo.ca/>. Students who are in emotional/mental distress should refer to Mental Health @ Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.

Portions of this document were taken from the Academic Calendar, the Handbook of Academic and Scholarship Policy and the Academic Handbook of Senate Regulations. This document is a summary of relevant regulations and does not supersede the academic policies and regulations of the Senate of the University of Western Ontario.