

# THE UNIVERSITY OF VERMONT

## 2000-2002 GRADUATE CATALOGUE ADDENDUM

### Page 25 Educational and Living Expenses\*

**Tuition.** The Tuition and fee charges listed here are for 2001-2002 only and are subject to change in future years. Tuition – Rates for the 2001-2002 academic year are as follows: For Vermont residents, **\$335.00** per credit hour; **\$4,020** flat rate for 12 hours and \$335.00 per credit hour in excess of 12 hours. For nonresidents of Vermont, **\$838** per credit hour; **\$10,050** flat rate for 12 hours, and \$838 per credit hour in excess of 12 hours.

The lower rates for Vermont residents are made possible by a subvention to the University from the State of Vermont.

\* ***Bold, italicized words indicate a change and/or addition to text.***

### GRADUATE STUDENT FEES\*

**Comprehensive Fee** – based on the number of credits enrolled per semester. Students pay a Comprehensive Fee each semester according to the following schedule: 0-3 (including Continuous Registration), no fee; 4 credits, \$52; 5 credits, \$60; 6 credits **\$68**; 7 credits, **\$74**; 8 credits, **\$82**; 9-11.5 credits, **\$88**; 12 or more **\$252.50** (includes health fee).

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### COURSE AND PROGRAM INFORMATION\*

#### Pages 35-36 ***Anatomy & Neurobiology (ANNB)***

*Neurobiology.* Focus on molecular and cellular aspects of the nervous system. Electrical signaling, synaptic transmission, signal transduction, neural development, plasticity and disease. Prerequisites: BIOL 103 or ANPS 19 & 20. Cross-Listings: BIOL 261. Three hours. Murakami, Parsons.

#### Pages 36-37 ***Animal Sciences (ASCI)***

220 New Title: *Lactation Physiology*  
Old Title: *Lactation and Milking*  
New Description: Physiological mechanisms that control and affect lactation in domestic and laboratory animals with emphasis on dairy cattle. Includes mammary anatomy, development and health, and milk synthesis.  
New Prerequisites: One chemistry course and one course in anatomy and physiology, or instructor permission.

272 *Advanced Topic in Zoos, Exotics and Endangered Species.* An exploration of modern zoo philosophy and ethics and the extent of human intervention necessary for the preservation of endangered species. Prerequisites: ASCI 171 and instructor permission. Three hours. Tuerk.

#### Pages 43-44 ***Botany (BOT)***

234 *Ecology of Freshwater Algae.*  
New Description: Community, population and physiological ecology of algae. Topics include taxonomy, diversity, distribution and seasonal succession, productivity and grazing, growth kinetics, and competitive and synergistic interactions.  
Prerequisites: BOT 160 or NR 103 or BIOL 102. Three hours. Hoffman, alternate years.

261 *Plant Growth and Development.*  
New Description: Concepts in plant structure and development. Biophysics of plant structure and pattern-formation. Introduction to methods of plant microscopy and microtechnique. Prerequisites BOT 104, 108, Introductory Physics. Four hours. Lintilhac.

## Pages 51-52 Civil and Environmental Engineering (CE)

241 *Traffic Operations & Design*. Advanced concepts of traffic engineering and capacity analysis; highway and intersection capacity; traffic analysis and simulation software; design and application of controls Instructor: Three hours. Adel W. Sadek

## Pages 56-58 Computer Science (CS)

218 New Title: *Community Leadership, Organization, and Institutional Development*. New Description: Role of civic engagement, leadership, and social and political institutions in a community development context. Special attention given to problems of formulation and implementation of alternative change strategies. New Prerequisites: Jr. Standing, CDAE 102, or permission. New Instructor: Schmidt.

222 New Prerequisites: CS 101

224 New Prerequisites: 103, 104; MATH 173 recommended.

251 New Title: *Artificial Intelligence*  
Old Title: *Machine Intelligence*  
New Prerequisites: CS 103, 104, STAT 151

260 New Prerequisites: CS 103, 104; MATH 124 and MATH 173 recommended.

264 New Title: *Risk Analysis and Forecasting Procedures*. New Description: Analytical concepts and skills and their applications in risk analysis related to agricultural and resource markets focusing on decision-making processes. New Prerequisites: STAT 141, CDAE 61, MATH 19, or Instructor permission. New Instructor: Liang.

265 New Prerequisites: CS 101, 104; MATH 173 and STAT 151 recommended.

266 New Title: *Decision Making for Agricultural and Resource Entrepreneurs*. New Description: Quantitative decision-making methods and applications in agricultural and resource businesses. Major topics include linear programming, risk and uncertainty, inventory decisions, and e-commerce. New Prerequisites: CDAE 166, MATH 19, and AGRI 85 or CS 2. New Instructor: Wang.

267 New Title: *Strategic Planning for Agricultural and Resource Entrepreneurs*. New Description: Application of marketing, finance, and management strategies. Drafting a simulated business plan for rural entrepreneurs and economic development. New Prerequisites: ARE major or minor or Instructor permission; senior standing. New Instructor: Liang.

272 New Title: *International Economic Development*. New Description: International trade, finance, investment and development theories and policies for community development. New Prerequisites: Jr. Standing, CDAE 102, Instructor permission. New Instructor: Wang, Ford.

273 New Title: *Project Development and Planning*. New Description: National, community and private sector project development. Focus on planning methods and policy instruments, sectoral linkages, and contributions to the economy as a whole. New Instructor: Ford.

## Pages 58-69 Education – Learning Studies (EDLS)

212 Delete: Child and Adolescent Psychology.

Change EDLS 377 to EDFS 377

## Education – Special Education (EDSP)

217 New Title: *Instruction for Individuals with Significant Disabilities*  
Old Title: *Instruction for Individuals with Severe Disabilities*  
New Description: Individualized instruction for learners with significant disabilities emphasizing objectives, assessment, task analysis, and behavior analysis

302 New Title: *Students with Significant Disabilities: Characteristics and Educational Interventions*  
Old Title: *Physical and Developmental Characteristics of Individuals with Multidisabilities*

New Description: Normal development – birth through six years, developmental disorders, disabilities, medical/health considerations. Management of significant disabilities through the employment of such procedures as handling, positioning, and feeding

### **Pages 74-75    Geography (GEOG)**

- 210    Delete: *Special Topics in Regional Geography*.
- 216    Delete: *Biogeography*.
- 233    Delete: *Rural Planning*.
- 242    Delete: Problems in Physical Geography.
- 245    *Advanced Topics in Human-Environment Interactions*. Advanced offerings on various manifestations of social-environmental relationships. Possible topics include sustainable development, environmental justice, and urban ecology. Prerequisites: Senior or Graduate standing with 9 hours in Geography, or instructor permission. Three hours.
- 246    *Advanced Topics in Climate and Water Resources*. Advanced analysis of regional climatology, hydroclimatological hazards, or fluvial geomorphology. Special topics might include droughts, severe weather, floods and flood plain management, mountains and lowland rivers. Prerequisites: Senior or Graduate standing with 9 hours in Geography, or instructor permission. Three hours.
- 261    Delete: Problems in Vermont Geography.
- 270    Delete: *Problems in Human Geography*.
- 272    *Advanced Topics in Space, Power and Identity*. Advanced offerings on topics related to the spatial regulation of geographic construction of social identity, paying particular attention to race, gender and sexuality. Prerequisites: Senior or Graduate standing with 9 hours in Geography, or instructor permission. Three hours.
- 273    *Advanced Topics in Political Economy and Ecology*. Advanced offerings in political economy, particularly at global and regional scales. Possible topics include Third World economic restructuring, globalization, international environmental movements. Prerequisites: Senior or Graduate standing with 9 hours in Geography or instructor permission. Three hours.
- 274    *Advanced Topics in Critical Urban and Social Geographies*. Advanced offerings in urban and critical social geography. Possible topics include social justice and the city, human rights, geographies of social control. Prerequisites: Senior or Graduate standing with 9 hours in Geography, or instructor permission. Three hours.
- 278    Delete: Gender, Space, and Environment.
- 281    New Title: *Advanced Topics in GIS and Remote Sensing*.  
Old Title: *Problems in Cartography*.  
New Description: Advanced offerings in GIS or remote sensing focusing on landscape interpretation for decision-making practices. Incorporation of applications from Vermont public and private sectors. New Prerequisites: Senior or Graduate standing with 9 hours in Geography, or instructor permission. Three hours.
- 285    Delete: *Remote Sensing and Environmental Problems*.
- 287    Change to GEOG 204; Change Prerequisites to: Senior or Graduate standing with 9 hours in geography or instructor permission. Three Hours. Wemple.

### **Pages 75-76    Geology (GEOL)**

- 353    *Critical Writing in Earth and Environmental Science*. Review of manuscripts and grants prepared by UVM students and faculty. Learn to write better by presenting writing, grammar and logic critiques in a seminar format. Prerequisite: Permission. One to Two hours. Bierman.

**Pages 78      *Historic Preservation/History (HP)***

- 301A    Change to HP 304.  
New Title: *Seminar in Contemporary Preservation Planning and Policy.*  
Old Title: *Historic Preservation Contemporary Practice.*  
New Description: This introduction to the professional practice of preservation planning traces the evolution of the historic preservation movement and examines contemporary preservation policy-making issues. Prerequisites: HP graduate majors only. Three hours. McCullough.
- 301B    Change to HP 305.  
New Title: *Historic Preservation Practice Methods.*  
Old Title: *Historic Preservation Contemporary Practice.*  
New Description: This course introduces students to professional practice methods for conducting historic site and structures surveys. National Register nominations, and rehabilitation investment tax credit application projects. Prerequisites: HP graduate majors only. Three hours. McCullough, Gilbertson, Visser.

**Pages 79-80    *History (HST)***

- 261    Delete: *Seminar in Latin American History: Early Latin American History.*
- 262    New Title: Seminar in Caribbean & Latin American History.  
Old Title: *Seminar in Latin American History: Modern.*  
New Description: Selected topics in Caribbean and Latin American History. Dungy
- 277    Delete: *Colonial Origins of American Society.*
- 278    Delete: *Colonial Origins of U.S. Government.*

**Pages 81-83    *Mathematics (MATH)***

- 241    New Prerequisites: MATH 52, 121, 124 or instructor permission.
- 251    New Prerequisites: MATH 52, 124 or instructor permission.
- 268    *Chaos, Fractals, and Dynamical Systems.* Discrete and continuous dynamical systems, Julia sets, the Mandebrot set, period doubling, renormalization, Henon map, phase plane analysis and Lorenz equations. Co-requisites: MATH 271 or 230 or instructor permission. Three hours. Yang.
- 268    *Mathematical Biology and Ecology.* Mathematical modeling in the life sciences. Topics include population modeling, dynamics of infectious diseases, reaction kinetics, wave phenomena in biology, and biological pattern formation. Prerequisites: MATH 124, 230 or instructor permission.

**Pages 83-84    *Mechanical Engineering (ME)***

- 249    *Computational Fluids Engineering.* Computational methods for solving the Navier-Stokes equations and combined thermo-fluid flows; finite-difference and finite-volume techniques; use of standard commercial CFD software. Prerequisites: ME 143 or equivalent. Three hours. Hitt.

**Pages 85-86    *Microbiology & Molecular Genetics (MMG)***

- 254    Change to MMG352. New Prerequisites: Agricultural BIOC 201 or BIOC 301, and 302 or equivalent. New Cross-Listing: BIOC 352. Pederson
- 320    New Title: *Cellular Microbiology.* New Description: Utilizes primary literature to explore the cellular and molecular basis of microbial pathogenesis caused by viruses, pathogenic bacteria and protozoan parasites. New Credit Hours: 4. New Instructors: Stein, Ward, Thali.

**Page 86-87    *Molecular Physiology and Biophysics (MPBP)***

201-  
202    *Human Physiology & Exercise*. A comprehensive in-depth presentation of the scientific basis of human function. Primarily for physical therapy students; a limited number of others may be admitted with permission. Prerequisites: CHEM 23 and 42 or equivalent, two semesters general physics, one semester mathematics, permission. Three-Three Hours. Instructor: Berger.

**Pages 87-90    *Natural Resources – Wildlife and Fisheries Biology (WFB)***

352    New Title: Population Dynamics and Modeling. New Prerequisites: An ecology course, STAT 211 or NR 140. New Cross-listings: None: New Instructor: Donovan.

**Pages 90-92    *Nursing (GRNU)***

334    Delete: *Theory & Practicum in Primary Health Care I*.

335    Delete: *Theory & Practicum in Primary Health Care II*.

350    *Theory and Practicum of the Primary Care of Children*. This course provides the theoretical basis for the primary care of children. An opportunity to apply and evaluate theories and research is provided in clinical settings. Prerequisites: GRNU 305, 310, 333. Five Hours. Pre/Corequisites: GRNU 306, 308 and 300 or 320.

351    *Assessment and Health Maintenance of Adults: Practicum*. Course provides opportunities for students to solidify knowledge of health assessment and initiate and evaluate interventions focusing on maintenance and enhancement of health of adults. Prerequisites: GRNU 305, 333. One hour.

352    *Theory and Practicum of the Primary Care of Women (FNP)*. Course provides the theoretical basis needed by FNPs for the primary care of women. Opportunities for application are provided through a 67.5-hour practicum. Prerequisites: GRNU 305, 306, 308, 310, 333. Pre/Corequisites: GRNU 307 and 300 or 320. Three hours.

353    *Theory and Practicum of the Primary Care of Women (ANP)*. Course provides the theoretical basis needed by ANPs for the primary care of women. Opportunities for application are provided through a 67.5-hour practicum. Prerequisites: GRNU 305, 306, 310, 333. Pre/Corequisites: GRNU 307 and 300 or 320. Two and a one half-hour.

354    *Theory and Practicum of the Primary Care of Families I*. This course focuses on the assessment, diagnosis, management and evaluation of acute and chronic health conditions commonly encountered in primary care. Prerequisites: GRNU 305, 333, 351. (Prerequisites: GRNU 308 & 350 for FNP Students.) Pre/Corequisites: GRNU 307, 352/353. Five Hours.

355    *Theory and Practicum of the Primary Care of Families II (FNP)*. Focus is on refinement of diagnostic and ethical judgments and therapeutic interventions used by FNPs in the provision of primary health care. Prerequisite: GRNU 354. Nine hours.

356    *Theory and Practicum Care of Families II (ANP)*. Focus is on refinement of diagnostic and ethical judgements and therapeutic interventions used by ANPs in the provision of primary health care. Prerequisites: GRNU 354. Six and one half hours.

357    *Advanced Nursing Practice of Older Adults*. Focus on health and disease and associated care and treatment of older persons by the advanced practice nurse. GRNU 310. Two hours.

358    *Practicum of Primary Care of Adults (Special Populations)*. Students refine their assessment, diagnostic and management skills for a specific clinical specialty. GRNU 353, 354, 307. Three hours.

359    *Primary Care in a Family Practice Setting: Clinical Integration*. Integration of the multidimensional aspects of the FNP role is the focus of this course. Prerequisites: GRNU 350, 352. Three hours.

363    Delete: *Theory & Practicum in Primary Health Care III (Adults)*.

364    Delete. *Theory & Practicum in Primary Health Care III (Family)*.

390 New Credit Hours: Variable 1-3

391 New Credit Hours: Variable 1-6.

### **Pages 94-97 Physical Therapy (PT)**

#### **PREREQUISITES TO THE MPT PROGRAM\***

Students must have completed 2 semesters of college chemistry, with *laboratory*, including introduction to organic chemistry; 2 semesters of college physics, with *laboratory*; and *1 semester of college math at least at the pre-calculus level, calculus preferred, or statistics.*

*\* Bold, italicized words indicate a change and/or addition to text.*

201 New Corequisites: PT 211, 221. Three hours. Nelson.

202 New Prerequisites: PT 201. New Corequisites: PT 212, 222, 232. Two hours. Sands.

211 New Corequisites: PT 201, 221. Two hours. Zimmy.

212 New Prerequisites: PT 211. New Co/requisites: PT 202, 222, 232. Two hours. Henry.

221 New Corequisites: PT 201, 211. Two hours. Wu.

222 New Prerequisites: PT 221. New Corequisites: PT 202, 212, 232. Two hours. Held

232 New Prerequisites: PT 201, 211, 221. New Corequisites: PT 202, 212, 222. One hour. Nelson, Sands.

### **Pages 98-99 Plant and Soil Science (PSS)**

215 Change Credit Hours for 3 to 2

217 Change Credit Hours from 3 to 2

223 Change Credit Hours from 3 to 2.

### **Pages 104-106 Social Work (SWSS) \***

First Paragraph: Remove *Research Assistant Professor Felicio*

#### **MASTER OF SOCIAL WORK**

Replace first sentence in the second paragraph with the following:

*In 2000-2001, a cohort of part-time students was admitted to the first year of the M.S.W. Program via a Distance/Off Campus option. Application for accreditation of this option was made during the spring 2001 semester. The option for them to complete the second half of the program via Distance/Off-Campus delivery rests on its accreditation. The Department of Social Work plans to make this option available to future applicants after it is accredited and in tandem with acquisition of the requisite university resources. This option enables students to complete the program on a part-time basis over four years.* Each course is planned with a combination of distance delivery methods and live gatherings. Field practice, to be completed during the second and third year of the program, will be available in regions around the state. This course requirement entails 15-20 weekday (Monday-Friday) hours of fieldwork per week. Therefore, prospective *students should plan ahead to arrange their schedules in order to accommodate the years when participation in the program entails taking the 15-20 hour a week practicum (3 credits per semester), a monthly field practicum seminar (1½ hours each meeting), and a social work practice course (3 credits per semester).*

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## REQUIREMENTS FOR ADMISSION TO THE GRADUATE STUDIES FOR THE DEGREE OF MASTER OF SOCIAL WORK\*

6. Demonstrated achievement of designated liberal arts content in their undergraduate studies including some courses in each of the following areas; social sciences (defined as including sociology, political science, anthropology, economics, etc.); behavioral and life sciences (defined as including psychology, human biology, human ecology, etc.); and humanities (defined as including history, philosophy, English, literature, religion, etc.). Most specifically, students must have completed at least one course in human biology and one in statistics. If they have not done so at the time of admission, they must complete these two prerequisites prior to starting the first fall semester of study in the advanced practice concentration curriculum.
7. Submission of a resume with their application materials before consideration of their file.

In addition to the above, the typed statement of purpose and written references (*at least one of which is an academic and one of which is a human services reference*) are also important sources of information regarding the qualifications and experiences of applicants. For the academic year 2001-2002, a non-refundable deposit of \$200 is required of accepted candidates to hold their place in the upcoming class; the deposit is applied toward the cost of the program when students become officially enrolled. Applicants should contact the Department of Social Work (802-656-8800) to receive an MSW Program Bulletin.

Applicants with a Bachelor of Social Work degree from a program accredited by the Council of Social Work Education (CSWE) may apply for Advanced Standing to the MSW program. Students granted advanced standing may waive certain program (Foundation) requirements. Full-time advanced-standing students start their programs in January of each year, while *all other* students start their programs in the fall semester. *This option is not available to students entering the program during the 2001-2002 academic year.*

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## MINIMUM REQUIREMENTS FOR THE DEGREE OF MASTER OF SOCIAL WORK\*

Replace first paragraph with the following:

*The Master of Social Work degree requires 60 credits of graduate study, unless students are admitted with Advanced Standing status. Advanced Standing status requires a minimum of 42 credits and is granted solely to students who have earned a Bachelor's degree in a program accredited, or acknowledged as being equivalent to a Bachelor's in Social work, by the Council on Social Work Education. Both groups of students must take all required and three of their nine elective credits in social work courses. At least six of these elective credits must be taken during the second half of the program. The policies and standards for maintaining program accreditation do not permit the granting of academic credit toward graduation for life experience.*

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## Pages 106-108 Statistics (STAT)

- 211 *Statistical Methods I.*  
New Description: Fundamental concepts for data analysis and experimental design. Descriptive and inferential statistics, including classical and nonparametric methods, regression, correction, and analysis of variance. Statistical software.
- 353 Delete: Modeling and Estimation of Animal Populations

## Administration

Colodny, Edwin (2001)	Interim President
Bramely, A. John, Ph.D. (2001)	Interim Provost
Huot, Anne E., Ph.D. (2001)	Interim Dean, Graduate College
Johnson, Rachel, Ph.D. (2001)	Acting Dean, College of Agriculture and Life Sciences

## **New Graduate Faculty Since January 1, 2000**

Rosalind E. Andreas	Education
Linda Backus	Education
Jacques A. Bailly	Classics
Caroline C. Beer	Political Science
Janice Y. Bunn	Mathematics and Statistics
David J. Bucci	Psychology
Lee S. Byung	Computer Sciences
Mary Canales	Nursing
Naomi Chesler	Mechanical Engineering
Kelvin Chu	Physics
Kelly A. Clark	Educatioin
Craig A. Damon	Computer Science
Margaret A. Daugherty	Biochemistry
Rona Delay	Biology
Donald F. Dennis	Natural Resources
Therese M. Donovan	VT Cooperative Fish & Wildlife
Rose L. Gail	Psychiatry
Rebecca Gajda	Education
Ellen Grimes	Dental Hygiene
Dieter C. Gruenert	Medicine
Johnette T. Hartnett	Education
Jeanne M. Harris	Botany & Agricultural Biochemistry
Gail A. D. Havens	Nursing
Randall L. Headrick	Physics
Willian C. Hession	Civil and Environmental Engineering
Charles G. Irvin	Pulmonary Disease & Critical Care Medicine
Lynn V. Johnson	Education/Physical Education
William S. Keeton	Natural Resources
Robert J. Kelm, Jr	Medicine
Kieran M. Killeen	Educational Leadership & Policy Studies
Christopher Koliba	Education
James Latridis	Mechanical Engineering
Bruce J. Leavitt	Surgery
John Lecky	Electrical and Computer Engineering
Mark A. Levine	Medicine
Thomas Lewis	Microbiology & Molecular Genetics
Alan Ling	Computer Science
Lisa A. Marsch	Psychiatry
J. Ellen Marsden	Natural Resources
Thomas B. McFadden	Animal Science
Keith Mintz	Microbiology & Molecular Genetics
Anthony D. Morielli	Pharmacology
Kentaro Murakami	Biology
Maureen D. Neumann	Education
Guiseppe Petrucci	Chemistry
Matthew D. Rand	Anatomy & Neurobiology
Karen Richardson-Nassif	Family Practice
Mara R. Saule	Bailey/Howe Library – Dean's Office
Stephanie Seguino	Economics
Andre Senecal	Romance Languages
Jeanne Shea	Anthropology
Peg B. Single	Educatioin
Felipe N. Soto-Adames	Biology
Sean Stilwell	History
Allan M. Strong	School of Natural Resources



Markus Thali	Microbiology & Molecular Genetics
Milton Tignor	Plant and Soil Science
John Todd	Natural Resources
Austin Troy	School of Natural Resources
Bridget D. Turner	Education
Mark D. Usher	Classics
Luis Vivanco	Anthropology
Hui Wu	Infectious Diseases-Medicine
Xindong Wu	Computer Science
Chunfang Wei	Botany
Beverley Wemple	Geography
Marie E. Wood	Medicine
Feng-Qi Zhao	Animal Science
Michael J. Zvolensky	Psychology