



# UNIVERSITY of NEW HAMPSHIRE

## Concluding Experiences

*UNH master's and doctoral programs have varying completion requirements, and are summarized in the following tables.*

### I. Summary of Master's Degrees Requirements

Program	Total Credits	Thesis Required	Concluding Experience
<b>Accounting (MS)</b>	30	No	Capstone Course: ACFI 850 (Accounting Theory and Research)
<b>Animal Science (MS)</b>	30	Yes	Thesis (6 credits)
<b>Biochemistry (MS)</b>	30 (Thesis) 30 (Non-Thesis)	Optional	Thesis (6 – 10 credits) or project report (0 credits) w/ oral defense
<b>Business Administration (MBA) Full-time</b>	48	No	Capstone Project: ADMN 905 + 906 (Corporate Consulting Project I & II)
<b>Business Administration (MBA) Part-time</b>	48	No	ADMN 982 Strategic Management
<b>Business Administration (MBA) Executive program</b>	51	No	ADMN 982 Strategic Management
<b>Business Administration (MBA) Online</b>	48	No	ADMN 982 Strategic Management
<b>Chemical Engineering (MS)</b>	30 (Thesis) 30 (Non-Thesis)	Yes	Thesis (6 credits) *Students may be exempted by the faculty because of previous research experience
<b>Chemical Engineering (M.Eng.)</b>	30	No	Master's Project: CHE 898 (3 credits)
<b>Chemistry (MS)</b>	30	Yes	Thesis (6 – 10 credits)
<b>Civil Engineering (MS)</b>	31	Yes	Thesis (6 credits)
<b>Civil Engineering (M.Eng.)</b>	30	No	Master's Project: CIE 898 (3 credits); or Oral Exam, or Written Exam

<b>Communication Sciences &amp; Disorders (MS): No Option</b>	61 (minimum)	Optional	Thesis (6 credits) or comprehensive exam
<b>Communication Sciences &amp; Disorders: Adult Neurogenic Disorders</b>	61 (minimum)	Optional	Thesis (6 credits) or comprehensive exam
<b>Communication Sciences &amp; Disorders (MS): Language and Literacy Disabilities</b>	61 (minimum)	Optional	Thesis (6 credits) or comprehensive exam
<b>Communication Sciences &amp; Disorders (MS): Early Childhood Communication Disorders</b>	61 (minimum)	Optional	Thesis (6 credits) or comprehensive exam
<b>Computer Science (MS)</b>	31 (Thesis) 31 (Exam) 34 (Project)	Optional	Thesis (6 credits); or Comprehensive exam (4 areas); or Project (3 credits)
<b>Development Policy &amp; Practice</b>	39	No	4-Term Project Requirement
<b>Earth Sciences (MS)</b>	30 (Thesis) 34 (Non-thesis)	Optional	Thesis (6 credits) w/ oral defense; or Written project (2 credits) w/written and oral defense
<b>Economics (MA)</b>	36	No	ECON 979 and Master's Paper presentation
<b>Educ: Counseling (MED)</b>	48	No	Comprehensive exam
<b>Educ: Early Childhood (MED)</b>	36 (Non-Thesis) 42 (Thesis)	Optional	Written & oral exam and graduation portfolio; or Thesis (6 credits) and graduation portfolio
<b>Educ: Early Childhood – Special Needs (MED)</b>	42 (Non-Thesis) 48 (Thesis)	Optional	Written & oral exam and graduation portfolio; or Thesis (6 credits) and graduation portfolio
<b>Educ: Special Education (MED)</b>	44 (minimum)	Optional	Research Project w/oral defense; or Thesis (6-10 credits)
<b>Educ: Teacher Education (MED/MAT)</b>	32	No	Portfolio and Colloquium in conjunction with internship
<b>Educ: Teacher Leadership (MED)</b>	32	Optional	Inquiry project; or thesis (6 credits)
<b>Educ: Administration &amp; Supervision (Ed.S.)</b>	36	No	Significant field project and field internship in an appropriate administrative setting (8 credits).
<b>Electrical Engineering (MS)</b>	34 (minimum)	Optional	Thesis (6 credits); or Non-Thesis option (4 credits of ECE 900 seminars)

<b>Electrical Engineering (M.Eng.)</b>	30	No	Two technical presentations and one technical paper, suitable for publication in a conference proceeding.
<b>English: Language &amp; Linguistics (MA)</b>	32	No	ENGL 998 plus scholarly paper (4 credits)
<b>English: Literature (MA)</b>	36	No	ENGL 998 plus Scholarly paper (4 credits )
<b>English (MST)</b>	32	No	Capstone experience (creative writing option, teacher inquiry option, or curricular option)
<b>Environmental Education (MA)</b>	32	No	Field based practicum and Program Portfolio (4 credits)
<b>Family Studies (MS)</b>	40 (Thesis) 42 (Non Thesis)	Optional	Thesis (6 – 10 credits); or comprehensive written exam
<b>Family Studies: MFT (MS)</b>	68	Yes	500 hours of Practicum (24 credits of FS 898) plus integrative paper and video w/oral presentation
<b>Genetics (MS)</b>	30	Yes	Thesis (6 – 10 credits)
<b>History (MA)</b>	30	Optional	Plan A – Thesis (6 credits) Plan B – Oral exam Plan C – Submit seminar or research paper and pass PhD qualifying exams
<b>History: Museum Studies (MA)</b>	30	No	Oral exam; or Major project
<b>Hydrology (MS)</b>	30 (Thesis) 34 (Non-Thesis)	Optional	Thesis (6 credits); or 2-credit directed research project (ESCI 898)
<b>Information Technology (MS)</b>	33	Optional	Thesis (6 credits); or project (3 credits)
<b>Justice Studies (MA)</b>	36	Optional	Thesis (8 credits); or JUST 897 (Culminating project, 4 credits) + JUST 950/951 (Internship, 4 credits)
<b>Kinesiology (MS)</b>	30	Optional	Thesis (6 credits); or Non-Thesis Plan (KIN 895, Advanced Studies); or Advanced Research Plan (Exercise Science Students must take KIN 896—Advanced Research in Exercise Science; Outdoor Education students must take KIN 897—Advanced Research in Outdoor Education)
<b>Liberal Studies (MALS)</b>	30	Optional	Thesis (6 credits); or project (6 credits)

<b>Materials Science (MS)</b>	30	Optional	Thesis (6 credits) plus oral defense; or project (MS 898, 3 credits) plus oral presentation
<b>Mathematics (MS)</b>	30	No	Oral Exam
<b>Mathematics: Applied (MS)</b>	30	Optional	Thesis(6 credits); or Project (MATH 898, 3 credits)
<b>Mathematics: Statistics (MS)</b>	30	No	Project (MATH 898) with oral presentation (3-6 credits)
<b>Mathematics (MST)</b>	30	No	Mathematics Portfolio and comprehensive problem set
<b>Mechanical Engineering (MS)</b>	32	Optional	Thesis plus oral exam(8 credits); or project plus oral exam(4 credits); or additional 900-level course in lieu of project or thesis based on industrial experience
<b>Mechanical Engineering (M.Eng.)</b>	32	No	Master's Project: ME 992 (4 credits) and presentation
<b>Microbiology (MS)</b>	30	Yes	Thesis (6-10 credits) and submission of manuscript for publication to a peer-reviewed journal.
<b>Music: Studies (MA)</b>	30	No	Written essay plus oral exam
<b>Music: Music Education (MA)</b>	30	No	Project plus oral exam
<b>Natural Resources (MS)</b>	30	Optional	Thesis (6 credits) plus oral defense; or NR 998 (Directed Research, 4 credits)
<b>Natural Resources-TIDES (MS)</b>	30	No	NR 998 (Directed Research)
<b>Nursing (MS)</b>	34 (CNL) 31 (EBN) 45 (FNP) 68 (DEMN)	CNL—Optional EBN—Optional FNP—Optional DEMN—No	Clinical Nurse Leader: NURS 958 (Capstone, 6 credits); or Thesis (6 credits) Evidence-Based Nursing: NURS 956 (Capstone, 3 credits); or Thesis (6 credits) Family-Nurse Practitioner: NURS 939 (Capstone, 6 credits); or Thesis (6 credits) DEMN: NURS 958 (Capstone, 6 credits)
<b>Nutritional Science (MS)</b>	30 (Thesis)	Yes	Thesis (6 credits)
<b>Occupational Therapy (MS)</b>	44 (Advanced	No	Capstone course: OT 865 (OT Practice and Professional Reasoning)

	Standing) 74 (Professional)		
<b>Ocean Engineering (MS)</b>	32	Yes	Thesis (6 credits)
<b>Ocean Engineering: Ocean Mapping (MS)</b>	33	Yes	Thesis (6 credits)
<b>Oceanography</b>	30 (Thesis) 34 (Non-Thesis)	Optional	Thesis (6 credits); or 2-credit directed research project (ESCI 898 or OCE 898)
<b>Painting (MFA)</b>	60	No	Exhibition and presentation along with written artist statement
<b>Physics (MS)</b>	33	Optional	Thesis(6 thesis credits with oral defense); or  Research Project (3 credits of research project work and oral exam in form of seminar); or  Exams (For Ph.D. students only—pass the written and oral qualifying exams)
<b>Plant Biology (MS)</b>	30	Yes	Thesis (6 – 10 credits)
<b>Political Science (MA)</b>	30 (Thesis) 30 (Non-Thesis)	Optional	Thesis (6 credits) w/oral defense; or Non-Thesis (comprehensive examination)
<b>Psychology (MA)</b>	30	Optional	Thesis ; or paper of publishable quality
<b>Public Administration (MPA)</b>	36 or 39	No	Capstone internship
<b>Public Health (MPH)</b>	48	No	Field study (3 credits) and Integrating Seminar (3 credits)
<b>Recreation Management &amp; Policy (MS)</b>	30	Optional	Thesis (6 credits with oral presentation); or RMP 995 (Colloquium, 3credits)
<b>Resource Administration (MS)</b>	34	Optional	Thesis (6 – 10 credits) or RAM 898 directed Research (4-6 cr), plus a final oral and/or written examination
<b>Social Work (MSW)</b>	35 (Advanced Standing) 62 (Generalist)	No	Two semester field internships (1,240 hours)
<b>Sociology (MA)</b>	32	Yes	Thesis (6 – 10 credits)
<b>Spanish (MA)</b>	30	No	Spanish 901 (3 credits) bibliographical essay
<b>Writing (MFA)</b>	48	Yes	Thesis (8 credits)
<b>Zoology (MS)</b>	30	Yes	Thesis (6 – 10 credits) w/oral defense

**Closed/Suspended Programs**

<b>Chemistry (MST) SUSPENDED ADMISSIONS</b>	30	No	None
<b>College Teaching (MST) SUSPENDED ADMISSIONS</b>	32	No	Teaching Praxis and teaching portfolio (8 credits)
<b>Educ: Administration and Supervision (MED) SUSPENDED ADMISSION</b>	36	Optional	Thesis; or research study
<b>Educ: Counseling (MA) CLOSED PROGRAM</b>	62 Thesis	Optional	Thesis (6 credits); or Inquiry project w/presentation
<b>Educ: Reading (MED) SUSPENDED ADMISSION</b>	36	Yes	Thesis (8 credits)
<b>English: Writing (MA) CLOSED PROGRAM</b>	32	No	Portfolio
<b>Management of Technology (MS) SUSPENDED ADMISSION</b>	36	No	MOT 946 (strategic Management of Technology)
<b>Resource Economics (MS) CLOSED PROGRAM</b>	30 (Thesis) 30 (Non-Thesis)	Optional	Thesis (6 – 10 credits) plus a final oral and/or written examination

**II. Summary of Doctoral Program Requirements**  
**(All programs require an oral defense of the dissertation)**

<b>Program</b>	<b>Course/Credit Hours</b>	<b>Candidacy/Qualifying Exam Requirements</b>	<b>Language / Research Proficiency Requirements</b>	<b>Teaching Requirement</b>	<b>Annual Review Required</b>
Animal & Nutritional Sciences	Program designed by guidance committee	Pass a qualifying exam conducted by guidance committee, which will contain oral and/or written components at the discretion of committee members	Present 1 seminar each year of enrollment	Teaching assistant two semesters or teach a course one semester	
Applied Mathematics	<p>9 courses totaling 27 credits from the following list:            PHYS 931, IAM 830, IAM 851, IAM 932, IAM 933, IAM 961, IAM 962. One of the following 2-course sequences can also apply:            MATH 847/IAM 950, ME 807/ME 909 or PHYS 953/PHYS 951</p> <p>In addition, must take a minimum of three technical electives totaling 9 credits from the following list:            IAM 940, ME 812, ME 911, and</p>	<p>Pass a three-part Ph.D. Qualifying Exam:</p> <ul style="list-style-type: none"> <li>• Comprehensive exam in mathematical methods</li> <li>• Comprehensive exam in numerical analysis and HPC</li> <li>• Oral or written exam in specialization area</li> </ul> <p>Seminar presentation of thesis proposal to dissertation committee</p>			

	other approved courses				
Biochemistry	Guidance committee will recommend courses, BCHM 851-852 recommended during first year	Written and oral defense of research proposal during spring of second year. Part II: Written and oral qualifying/proposal examination. Further details can be found at - <a href="http://mcbsgrad.unh.edu/diagnostic-exams">http://mcbsgrad.unh.edu/diagnostic-exams</a>	None stated	Normally one year part-time teaching required	Yes
Chemical Engineering	39 course credit hours (or 11 courses, whichever comes first) beyond the Bachelor's degree. 5 of those courses must be level 900 or above. The remaining courses (totaling 24 credits) may be at the 800- or 900-level, and can be 3, or 4, credit courses  15 credits (or 5 courses) beyond Master's degree	Written qualifying exam in the 5 core courses (all coursework including electives should normally be completed by the end of the second year of full-time graduate study and must be completed before the student can be advanced to candidacy)  Oral defense of research proposal	None	None stated	Yes
Chemistry	Completion of coursework appropriate to the student's field of study	Series of examinations in the major field  Present and defend an original research proposal before the end of	None stated	Some teaching experience during tenure as student	



		the third year			
Chemistry-Education	Completion of coursework appropriate to the student's field of study	Series of examinations in the major field  Present and defend an original research proposal before the end of the third year	None Stated	None Stated	
Civil Engineering	24 credits beyond a master's degree	Successful completion of the Ph.D. qualifying examinations and the language or research tool requirement	Must prove proficiency (via coursework, exam, or both) in a language or research tool in an appropriate area based on the student's concentration	One semester as a teaching assistant or comparable experience unless previous teaching experience as a graduate student	Yes
Computer Science	CS 900  7 CS graduate courses (at least 21 credits) beyond M.S. or 15 CS graduate courses beyond B.S.	Pass a depth examination, which evaluates a student's ability to complete initial research in an area likely to lead to a dissertation topic. There are both written and oral components to this exam	Research tool: take non CS courses as appropriate to the student's field of research	None stated	
Earth and Environmental Sciences	4 core courses 36 credits required for students without master's degree  Final credit requirements determined by	Comprehensive Exam (written and oral) Proposal Exam (written and oral)	Possible proficiency in one foreign language and one computer language (at the discretion of student's adviser)	None Stated	

	guidance committee				
Economics	<p>Nine core courses, two fields of concentration (a major field and a minor field), field and research workshops.</p> <p>All coursework is post-master.</p>	Comprehensive examinations in microeconomics and macroeconomics; exam in major field (health economics, environmental economics or international economics)	One foreign language (if deemed essential to student's research by dissertation chair)	None stated	
Education	Typically 52-64 credit hours beyond the master's degree	Qualifying exam	None	None Stated	Yes
Electrical Engineering	<p>24 credits beyond MS; 3.33 overall GPA</p> <p>Courses determined by guidance committee</p>	Pass written and oral examinations on the subject matter of their field of study	None	None Stated	Yes
English	<p>Literature: 9 courses (4 seminars); must include ENGL 910, 926 and 924</p> <p>Composition: 10 courses (4 seminars); must</p>	<p>Literature: General exam in American and English literature and a more specialized exam</p> <p>Composition: combined general and qualifying exam focused on theory of composition and rhetoric and on secondary area of specialization</p>	Two foreign languages OR advanced proficiency in one	Normally hold assistantships and teach under supervision	

	include ENGL 910 and 918  All credits are post-master.	Proposal defense			
Genetics	Determined by guidance committee	Pass an oral qualifying examination conducted by the guidance committee	None stated	Must present one seminar each year	
History	Two research seminars, two reading seminars, a course in historical methods, HIST 970 (for TA recipients), other courses determined by committee	Complete research seminars in early and modern U.S. history, reading seminars in early and modern U.S. history, a course in Historical Methods, History 970 (teaching assistants only), and courses to prepare fields or correct any deficiencies in the student's previous preparation  Demonstrate proficiency in a foreign language  Pass written and oral qualifying exams	Foreign language exam or series of language courses determined by department	Expected to undertake teaching in department during residence	Yes
Materials Science	Students must complete 39 post baccalaureate course credits. The student is expected to take MS 860, Thermodynamics and Kinetics of Materials I; MS 961,	Completion of M.S. degree or 24 credits of graduate courses with at least 6 credits at the 900 level and the qualifying examination  Qualifying exam: -written proposal and oral defense -substantive review paper and oral presentation	None stated	None Stated	Yes

	<p>Thermodynamics and Kinetics of Materials II; one course each satisfying the areas of synthesis and processing, characterization, and structure-property relationships, and two semesters of MS 900, Materials Science Seminar. In addition, the student must take five additional courses with at least 12 total credits at the 900 level (including those courses taken at the master's level). Students who have done graduate work at other schools that included courses similar to those in the Materials Science Program may petition for waivers of UNH degree requirements.</p>				
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Mathematics	MATH 951-955, advanced coursework in major and minor fields	Oral examinations in major and minor and areas	None Stated	Experience in teaching equivalent to at least half-time for one year	
Mathematics Education	All courses 951-955; Advanced coursework in the major field (mathematics education), including MATH 958, 968A, and 968B, and at least two semesters of MATH 978, and in a minor field.	Qualifying examinations in major and minor fields  Proposal defense in the major field of mathematics education and a presentation in the minor field	None Stated	Experience in teaching equivalent to at least half-time for one year	
Mechanical Engineering	A student entering with a B.S. degree must successfully complete at least twelve 3- or 4-credit courses with five at the 900 level. Students entering with an M.S. degree in engineering are required to take a minimum of five 3- or 4-credit courses with three at the 900 level. This course requirement represents the	Qualifying exam	None stated	Must present at one ME seminar per year	

	<p>department's minimum for any Ph.D. student. Students normally take more than the required number. Further course requirements are identified by the student's area of concentration and by the guidance committee.</p>				
Microbiology	<p>All courses required by the Graduate Committee including MCBS 905</p>	<p>All courses required by the Graduate Committee including MCBS 905  A written qualifying exam administered by the Graduate Program Coordinator and graduate faculty  An independent research proposal developed in conjunction with a faculty adviser  An oral defense of the research proposal</p>	None stated	One semester	
Natural Resources and Environmental Studies	<p>4 core courses</p> <p>36 credits required for students without Master's</p> <p>Final credit requirements determined by guidance committee</p>	<p>Comprehensive Exam (written and oral)</p> <p>Proposal Exam (written and oral)</p>	<p>Possible proficiency in one foreign language and one computer language (at the discretion of student's adviser)</p>	None Stated	

Nursing Practice	10 courses/36 credits.	Successful defense of a practice dissertation			
Ocean Engineering	<p>One course in oceanography or ocean science</p> <p>Two courses in advanced OE topics (two at 900 level)</p> <p>Two courses from the following (one at the 800 level; one at the 900 level)</p> <p>Four electives (two at 800 level; two at 900 level)</p> <p>All credits are post-bachelor.</p>	<p>Qualifying exam (by end of second year)</p> <p>Proposal oral exam</p>	None stated	None stated	
Oceanography	<p>Students entering the program without a master's degree are expected to complete a minimum of 36 credit hours.</p> <p>Students with an M.S. degree in oceanography or related field in physical science</p>	Comprehensive and proposal examinations	Foreign language requirement is determined by the FGC	Although not a strict requirement, all graduate students are encouraged to obtain teaching experience, preferably as a teaching assistant.	

	<p>from UNH or another university should first demonstrate (through accredited transcript or the qualifying examination) acceptable mastery in the basic core areas. Those deficient in any discipline will be required to complete the respective course.</p> <p>All students must complete at least one course from each of the following categories: natural sciences, methods, ethics/policy/law, and seminar. Please see below for a list of courses that meet these specifications. Additional credit hours are determined by the FGC (typically 15 credit hours).</p>				
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<p>Physics</p>	<p>805, 931, 935, 939, 941-942, and 943-944. Four additional electives must be taken (excluding 999); no more than two may be at the 800 level. Students are also expected to take two semesters of PHYS 806.</p> <p>For students doing Ph.D. research in astrophysics or space physics, three of their four elective courses must be PHYS 951 and PHYS 953, and one of PHYS 954 or PHYS 987.</p> <p>All credits are post-bachelor.</p>	<p>Written comprehensive exam Oral proposal defense</p>	<p>None stated</p>	<p>At least half time for one year or equivalent</p>	
<p>Plant Biology</p>	<p>Courses determined by guidance committee, no minimum stated</p>	<p>Written/Oral comprehensive exams</p>	<p>Guidance committee determines whether foreign language will be required</p>	<p>Required; may be fulfilled by enrolling in a supervised teaching course, serving as a teaching assistant or by</p>	

				having previous teaching experience	
Psychology	<p>Required courses include first-year seminar (PSYC 904), three semesters of research methods and statistics (PSYC 905, 906, and 907 or 908), six advanced graduate seminars, and two semesters of the practicum and seminar in the teaching of psychology (PSYC 991-992). First-year students also participate in a noncredit graduate proseminar (PSYC 901-902), which introduces students to the research programs of the faculty.</p> <p>Depth in a particular area is obtained through participation in advanced seminars</p>	<p>Receive master's degree Written examination in area of specialization Identify topic for doctoral research</p>	None	Teaching two semesters of introductory Psych during third year; teach an introductory course in specialty during 4 <sup>th</sup> year	

	<p>and by independent reading and research conducted under the supervision of a faculty member.</p> <p>All credits are post-bachelor.</p>				
Sociology	<p>Minimum 3 years in residence. 16 courses in sociology (8 seminars) including SOC 900, 911, 912, and 901-904, 4 courses in major area, 5 electives</p> <p>Credits are post-bachelor.</p>	<p>Written exams in major area of study, advanced theory, and methodology</p>	<p>Language proficiency recommended, but not required</p>	<p>Teaching recommended</p>	
Statistics	<p>MATH 836, 839, 840, 855, 856, 941, 945, 946; three elective courses from among MATH 837, 841, 843, 844, 942, 944, 969, 979 (MATH 969 and 979 are topics courses and may be taken more than once)</p>	<p>Written qualifying examinations in theory of statistics and in applied statistics</p> <p>Proposal defense in the major field of statistics</p>	<p>None Stated</p>	<p>None Stated</p>	

	<p>Minor coursework: one course in analysis (either MATH 867 or MATH 953) and two courses in a focused minor area to be selected in consultation with the program advisor</p> <p>Participation in the one-credit statistics seminar during at least three semesters</p>				
Systems Design	Courses determined by guidance committee	Qualifying exam Language and/or research-tool proficiency exam	Language or research tool	None stated	Yes
Zoology	Courses determined by student and committee	Defend research proposal Qualifying exam in major and minor fields	One foreign language	Students encouraged to obtain teaching experience, preferably as a teaching assistant	

**Non-Admitting Programs**

Literacy and Schooling	No minimum (must complete specific courses)	Written examination near the conclusion of coursework	None		
Natural Resources	36 credits beyond BS	Written and oral comprehensive, proposal and final examinations	One foreign language or one computer		

			programming language		
NRESS EES: Geology EES: Oceanography EES: Earth Sciences	36 credits beyond BS	Written and oral comprehensive, proposal and final examinations	Guidance committee determines whether a foreign language will be required		
Reading & Writing Instruction	No minimum	Written qualifying examination near the conclusion of coursework	None		

3/00; rev 3/02; rev 5/04; rev 4/07; rev 09/07; rev 3/08; rev 12/09; rev 11/12; rev 11/13; rev 12/13