

Concurrent MEMP/MEM degree

The concurrent MEMP/MEM degree requires 60 total credits, taking between 24 and 28 months to complete, including 6 credits for the MEMP internship and 7 credits for the MEM master’s project and MP seminar.

A generic sample curriculum for a concurrent MEMP/MEM degree is shown below. Similar sample curricula for particular MEM programs follow. The sample curricula assume 3 credits per course; where course credits differ, a student may take more or fewer courses in a semester. For some MEM programs, MEMP core courses may satisfy one or more MEM program requirements (e.g., Finance may satisfy a tools requirement, or IP Law may satisfy a social science requirement), freeing up more choice in Nicholas School credits than is shown below.

	Summer (June – August)	Fall (September – December)	Spring (January – May)
First Year	<i>MEMP Internship (6 credits)</i>	<i>MEMP Finance</i> <i>MEMP Marketing</i> 2 MEM core courses	<i>MEMP IP Law</i> <i>MEMP Management</i> 2 MEM core courses MEM skills/tools course
Second Year	MEM Internship (not required)	<i>MEMP Elective</i> 2 MEM courses in in-depth area MEM tools/skills course MEM Master’s Project (3 cr)	<i>MEMP Elective</i> MEM course in in-depth area MEM tools/skills course MEM Master’s Project and Seminar (4 credits)
Third Year	Completion of MEM Master’s Project	Optional semester to complete MEM Master’s Project and any additional credits needed to satisfy requirements	

The curriculum above meets all requirements for MEMP and the MEM program, distributing requirements of both degree programs across a minimum of four academic semesters and three summers (28 months). Most students will need to spend a fifth semester finishing the MEM Masters Project and any remaining course credits. The fifth semester will especially be necessary for non-native English speakers who must take English courses to enhance their language skills and for students who must take additional courses during the first year to meet MEMP or MEM prerequisites (which would not earn any credit towards the graduate degrees).

Sample Curricula for Concurrent MEMP and Specific MEM programs:

Curriculum requirements for joint degrees can be met as follows, with MEMP contributions to MEM program requirements (but not to MEM credits) shown in bold. (Note that “NS credits” means courses taken for credit toward the MEM degree; these need not be Nicholas School courses.)

Energy & Environment MEMP/MEM

Within the Nicholas MEM, the Energy & Environment program is intended to provide students with a broad perspective on energy and its related challenges, and an understanding of the important links between markets, policy, technology and the environment.

- “Energy & Environment” core course (3 NS cr)
- In-depth Energy and Environment courses from 3 areas:
 - Energy Resources & Technology (courses in geology and engineering) (6 NS cr)
 - Environmental Science (6 NS cr)
 - Markets & Policy (courses in economics, law, business and policy) – (3 NS cr), [**MEMP IP Law, MEMP Marketing**]

- 8-9 credits in tools (e.g., Energy Analysis, Financial Analysis, Applied Data Analysis) – (5-6 NS cr) [**MEMP Finance, MEMP Management**]
- 11-12 credits in electives, including experiential short courses, specializing electives, and integrating electives, including electives from the Pratt School of Engineering.(5-6 NS cr, 6 Pratt cr)
- MEM Master’s Project and MP seminar (7 NS cr)
- MEMP internship (6 Pratt cr)

	Summer	Fall	Spring
First Year	<i>MEMP Internship (6 credits)</i>	<i>MEMP Finance</i> <i>MEMP Marketing</i> MEM Energy & Environment ENV Environmental Science MEM Energy Economics & Policy	<i>MEMP IP Law</i> <i>MEMP Management</i> MEM Energy Technology MEM Applied Regression Analysis MEM Energy Modeling
Second Year	MEM Internship (not required)	<i>MEMP Elective</i> MEM Energy Elective MEM Energy Analysis MEM Elective MEM Master’s Project (3 credits)	<i>MEMP Elective</i> MEM Polciy Elective MEM Environmental Science MEM Master’s Project and Seminar (3 credits)
Third Year	Complete MEM Masters Project	Optional semester to complete MEM Master’s Project and any additional credits needed to satisfy requirements	

*Participating Energy and Environment Faculty (*adjunct/contract instructor):* Lincoln Pratson, Richard Newell, Dalia Patino-Echeverri, Natalia Mirovitskaya, Marty Smith, Erika Weinthal, Joseph Stanislaw*, Simon Rich*, Cary Gravatt*, Joe DeCarolis*, Tim Johnson*

Ecotoxicology & Environmental Health MEMP/MEM:

Ecotoxicology & Environmental Health (EEH) seeks to instill in the student a science-based approach combining integrated assessment for humans, biota, and natural resources.

EEH core courses (ENV 298.02 Environmental Epidemiology, ENV 240 Chemical Fate of Organic Compounds or ENV 242 (Aquatic Chemistry), ENV 212 Environmental Toxicology, ENV 239 Human Health and Environmental Risk Assessment

- course in ecology or global change (12 NS cr)
- MEMP core courses (Finance, Marketing, IP Law, Management) (12 Pratt cr)
- In-depth Ecotoxicology & Environmental Health from 3 areas (9 NS cr):
 - Environmental Toxicology
 - Environmental Health (at least 3 cr)
 - Environmental Chemistry (at least 3 cr)
- Tools (one course in statistics, two in a focal area such as risk analysis, geospatial analysis, and one course in law, policy, other social science ((e.g., Energy Analysis, Financial Analysis, Applied Data Analysis) – (12 NS cr) [**MEMP IP Law**]
- 6 credits in electives, including electives from the Pratt School of Engineering (6 Pratt cr)
- MEM Master’s Project and MP seminar (7 NS cr)
- MEMP internship (6 Pratt cr)

	Summer	Fall	Spring
First Year	<i>MEMP Internship (6 credits)</i>	<i>MEMP Finance</i> <i>MEMP Marketing</i> ENV Env Toxicology	<i>MEMP IP Law</i> <i>MEMP Management</i> ENV Chem Fate Org Compounds

		ENV Env Epidemiology	ENV tools course ENV/BIO ecology/global change
Second Year	MEM Internship (not required)	<i>MEMP Elective</i> ENV Env Health course ENV statistics course) ENV Human Health course MEM Master's Project (3 credits)	<i>MEMP Elective</i> ENV Combined human/env health ENV tools course ENV Master's Project and Seminar (4 credits)
Third Year	Complete MEM Master's Project (3 credits)	Optional semester to complete MEM Master's Project and any additional credits needed to satisfy requirements	

*Participating Ecotoxicology & Environmental Health Faculty (*adjunct/contract instructor):* David E. Hinton, Marcia Angle*, Celia Bonaventura, Richard DiGiulio, , Prasad Kasibhatla, Randall Kramer, Joel Meyer, Marie Lynn Miranda, Daniel Rittschof, Daniel Richter, Heather Stapleton, Avner Vengosh, Jonathon Wiener

Water and Air Resources MEMP/MEM

The program in Water and Air Resources (WAR) enables students to understand the physical, chemical, and biological processes affecting aquatic and atmospheric environments. The program concentrates on problems that span the natural divisions of the biosphere, soil, plants, lakes, watersheds, and the atmosphere, and teaches quantitative techniques, including measurement and modeling methods used by researchers and environmental managers.

- Core courses in physical sciences, chemical sciences and biological/ecological sciences pertinent to water and air resources (9 NS cr)
- One course in law, policy or economics [**MEMP IP Law**]
- MEMP core courses (Finance, Marketing, IP Law, Management) (12 Pratt cr)
- Three specialization courses in water or air resources (3-9 NS cr) [**MEMP electives**]
- Three courses in analytical tools (3-9 NS cr) [**MEMP electives**]
- Electives, including electives from the Pratt School of Engineering.(2-11 NS cr, 6 Pratt cr)
- MEM Master's Project and MP seminar (7 NS cr)
- MEMP internship (6 Pratt cr)

	Summer	Fall	Spring
First Year	<i>MEMP Internship (6 credits)</i>	<i>MEMP Finance</i> <i>MEMP Marketing</i> ENV physical science course ENV tools course	<i>MEMP IP Law</i> <i>MEMP Management</i> ENV chemical science course ENV biol/ecological science course ENV tools course
Second Year	MEM Internship (nor required)	<i>MEMP Elective</i> ENV water/air resources ENV water/air resources ENV Elective MEM Master's Project (3 credits)	<i>MEMP Elective</i> ENV water/air resources ENV tools course ENV Master's Project and Seminar (4 credits)
Third Year	Complete MEM Masters Project	Optional semester to complete MEM Master's Project and any additional credits needed to satisfy requirements	

*Participating Water and Air Resources Faculty (*adjunct/contract instructor):* John D. Albertson, Paul Baker, Prasad S. Kasibhatla, Gabriel G. Katul, Ram Oren, Lincoln Pratson, Kenneth Reckhow, Curtis J. Richardson, Daniel D. Richter, John J. Vandenberg, Avner Vengosh.