

**Johns Hopkins Engineering**  
**Environmental Engineering, Science, and Management Programs**  
*(Long-Term Tentative Course Schedule)*

**Environmental Engineering, Master of Environmental Engineering**

Course Number	Course Title	Instructor(s)	Term Offered		
			FALL	SPRING	SUMMER
575.604	Principles of Environmental Engineering	Dr. Hedy Alavi	X	X	X
575.605	Principles of Water and Wastewater Treatment	Dr. Zohreh Movahed Dr. Christian Davies-Venn		X	
575.606	Water Supply and Wastewater Collection	Dr. Christian Davies-Venn	X		
575.607	Radioactive Waste Management	Dr. Ralph Lightner		X	
575.620	Solid Waste Engineering and Management	Dr. Hedy Alavi	X		
575.623	Industrial Processes and Pollution Prevention	Dr. Jill Engel-Cox Ms. Kimberly Fowler	X		
575.703	Environmental Biotechnology	Dr. Mahnaz Mazaheri Assadi			X
575.706	Biological Processes for Water and Wastewater Treatment	Dr. Sepideh Jankhah	X		
575.715	Environmental Contaminant Dispersion and Transport	Dr. Harihar Rajaram	X		
575.721	Air Quality Control Technologies	Dr. Michael Robert		X	
575.732	Energy Technologies for Solving Environmental Challenges	Dr. Thomas Jenkin		X	
575.741	Membrane Filtration Systems and Applications in Water and Wastewater Treatment	Dr. Sepideh Jankhah		X	
575.742	Hazardous Waste Engineering and Management	Dr. Hedy Alavi		X	
575.745	Physical and Chemical Processes for Water and Wastewater Treatment	Dr. Harish Arora		X	
575.746	Water and Wastewater Treatment Plant Design	Dr. Christian Davies-Venn Dr. Harish Arora			X
575.748	Water Quality Engineering with Green Infrastructure <i>*NEW*</i>	Dr. Arthur McGarity	X		
575.749	Water Quality of Rivers, Lakes, and Estuaries	Dr. Ciaran Harman	X		
575.761	Measurement and Pseudo-measurement in the Environmental Arena	Dr. Abel Wolman Dr. Gordon Grant		X	
575.801	Independent Project in Environmental Engineering, Science, and Management	Research Faculty - Dept. of Environmental Health & Engr.	X	X	X

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**Environmental Engineering and Science, Master of Science**

Course Number	Course Title	Instructor(s)	Term Offered		
			FALL	SPRING	SUMMER
575.601	Fluid Mechanics	Dr. Salman Haq		X	
575.615	Ecology	Dr. William Hilgartner	X		
575.619	Principles of Toxicology, Risk Assessment, and Management	Dr. Michael Dellarco	X		
575.626	Hydrogeology	Dr. Frank Barranco Dr. Khandaker Ashfaque		X	
575.629	Modeling Contaminant Migration Through Multimedia Systems	Dr. Khandaker Ashfaque Dr. Michael Robert Dr. Andrew Stoddard			X
575.643	Chemistry of Aqueous Systems	Dr. John Sivey			X
575.645	Environmental Microbiology	Dr. Amar Wadhawan		X	
575.704	Applied Statistical Analysis and Design of Experiments for Environmental Applications	Dr. Barry Bodt			X
575.708	Open Channel Hydraulics	Dr. Mahmood Naghash			X
575.713	Field Methods in Habitat Analysis and Wetland Delineation	Dr. William Hilgartner			X
575.716	Principles of Estuarine Environment: The Chesapeake Bay Science and Management	Mr. Chris Overcash Dr. Robert Summers	X		
575.717	Hydrology	Dr. Jeffrey Raffensperger	X		
575.727	Environmental Monitoring and Sampling	Dr. Andrew Stoddard Dr. Michael Robert Dr. Khandaker Ashfaque	X		
575.728	Sediment Transport and River Mechanics	Dr. Allen Gellis		X	
575.730	Geomorphic and Ecologic Foundations of Stream Restoration	Dr. Daniel Baker Dr. Joel Sholtes		X	
575.743	Atmospheric Chemistry	Dr. Chris Jakober Dr. Michael Robert	X		
575.744	Environmental Chemistry	Dr. Shalini Jayasundera	X		
575.763	Nanotechnology and the Environment: Applications and Implications	Dr. Talia Abbott Chalew		X	
575.801	Independent Project in Environmental Engineering, Science, and Management	Research Faculty - Dept. of Environmental Health & Engr.	X	X	X

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**Environmental Planning and Management, Master of Science**

Course Number	Course Title	Instructor(s)	Term Offered		
			FALL	SPRING	SUMMER
575.608	Optimization Methods for Public Decision Making	Dr. Justin Williams			X
575.611	Economic Foundations for Public Decision Making	Dr. Manuchehr Shahroghi	X		
575.628	Business Law for Engineers	Dr. Arthur Reynolds	X		
575.635	Environmental Law for Engineers and Scientists	Mr. Timothy Henderson, Esq. Mr. Anthony Gorski, Esq.	X		
575.637	Environmental Impact Assessment	Dr. Mahnaz Mazaheri Assadi Dr. Hedy Alavi		X	
575.640	Geospatial Intelligence: the art and science for better understanding our world	Dr. William Roper		X	
575.658	Natural Disaster Risk Modeling	Dr. Gonzalo Pita	X		
575.707	Environmental Compliance Management	Dr. Kurt Riegel		X	
575.710	Financing Environmental Projects	Dr. Arthur Reynolds			X
575.711	Climate Change and Global Environmental Sustainability	Dr. Michael Robert Ms. Meghan Klasic		X	
575.714	Water Resources Management	Dr. Jim George			X
575.722	Principles of Air Quality Management	Dr. Michael Robert Ms. Susan Wierman	X		
575.723	Environmental Sustainability and Next Generation Buildings	Dr. William Roper			X
575.731	Water Resources Planning	Dr. Bonnie Kranzer Boland	X		
575.733	Energy and the Environment	Dr. Ralph Lightner		X	
575.734	Smart Growth Strategies for Sustainable Cities	Dr. William Roper	X		
575.735	Energy Policy Planning and Modeling	Dr. Cynthia Bothwell		X	
575.736	Designing for Sustainability: Applying a Decision Framework	Dr. Deborah Kopsick	X		
575.737	Environmental Security with Applied Decision Analysis Tools	Dr. Justin Williams Dr. Abel Wolman		X	
575.738	Transportation, Innovation, and Climate Change	Dr. John Munro		X	
575.747	Environmental Project Management	Mr. Jay Abbott Dr. Hedy Alavi			X
575.750	Environmental Policy Needs in Developing Countries	Dr. Deborah Kopsick		X	
575.751	Environmental Justice, Climate, and Health Equity	Dr. Babak Tofighi		X (SPR 2026)	

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575.752	Environmental Decision-Making: Climate, Energy, Indigenous Populations, and Accessibility	Dr. Kelly Tzoumis			X (Start 2025)
575.753	Communication of Environmental Information and Stakeholder Engagement	Dr. Jill Engel-Cox			X
575.759	Environmental Policy Analysis	Dr. Deborah Kopsick	X		
575.771	Data Analytics in Environmental Health and Engineering	Dr. J. Hugh Ellis	X		
575.801	Independent Project in Environmental Engineering, Science, and Management	Research Faculty - Dept. of Environmental Health & Engr.	X	X	X