

PROFESSIONAL STUDIES URBAN SUSTAINABILITY (PSUS)

Explanation of Course Numbers

- Courses in the 1000s are primarily introductory undergraduate courses
- Those in the 2000s to 4000s are upper-level undergraduate courses that also may be taken for graduate credit with permission and additional work assigned
- Those in the 6000s and 8000s are for master's, doctoral, and professional-level students
- The 6000s are open to advanced undergraduate students with approval of the instructor and the dean or advising office

PSUS 5099. Variable Topics. 1-99 Credits.

PSUS 6201. Principles of Sustainable Urban and Regional Planning. 3 Credits.

The environmental, social, and economic elements of sustainability. Present and future challenges, including environmental management, energy policy, financial crises, global warming, inequality, public education, third and first world slums, the success and failure of nations, urban agriculture, urban economics, and more. The implications of sustainable development and conducting research based on evidenced-based policy. Students focus on the work of researchers outside of the planning field as they write a series of research essays containing reviews of relevant scientific literature.

PSUS 6202. Urban and Environmental Economics. 3 Credits.

The application of neoclassical economics to problems faced by practitioners of the field of sustainable urban and regional planning. Key economic concepts including supply and demand, consumption and production, markets and market failure, and measurement of environmental and other non-market commodities. An economist's perspective on the principals and methods for understanding urban and environmental challenges and solutions, urban growth, environmental quality, public policy, and other issues fundamental to contemporary development.

PSUS 6203. Research Methods: Geospatial and Econometric Analysis. 3 Credits.

Developing proficiency in geographic information systems (GIS) and econometric analysis; building and analyzing spatial datasets using ArcGIS and Stata statistical software.

PSUS 6204. Land Use Law. 3 Credits.

Understanding the legal context of land use planning as it applies to contemporary issues. The role of land use law in shaping the urban context and its implications for policy and practice.

PSUS 6205. Justice, Equity, Diversity, and Inclusion. 3 Credits.

Current patterns of urban development, including segregation, concentrated poverty, suburban sprawl, and gentrification. Restricted to students in the sustainable urban planning program.

PSUS 6210. Transportation Planning in City Systems. 3 Credits.

Transportation planning with long-run goals in mind, including reducing greenhouse gas emissions. The role of planning at local and regional scales within the broader framework of transportation engineering.

PSUS 6211. Regional Development and Agricultural Economics. 3 Credits.

The economics of land use patterns and development processes in the United States and elsewhere in the world. Introduction to the field of agricultural economics and examination of food deserts and other food-related problems relevant to the field of sustainable urban planning.

PSUS 6212. Sustainable Communities I: Housing and Design. 3 Credits.

Community development with a focus on policy and the various sectors of interest that affect contemporary urbanization. How policies, planning techniques, and implementation strategies form the core work of planning practitioners. Topics include water supply, food deserts, public health, and urban resilience. Pathways to more sustainable communities are explored through the policy arenas in which key decisions are made; key sectors that make up the fabric of communities; and special topics that have emerged as critical challenges for sustainable community development.

PSUS 6213. Advanced Research Methods Individual Mentoring. 3 Credits.

Builds on research skills learned in PSUS 6203. Students in the sustainable urban planning program work one-on-one with a faculty member of their choice on a project of joint design. Prerequisite: PSUS 6203.

PSUS 6214. Food and Cities. 3 Credits.

Examines agricultural systems, food production, consumption, and trade, and their links to urbanization, city growth, and public health, through lenses of history, technology, economic theory, geography, and public policy. The course explores the roles that food plays in the lives of urban inhabitants, and in shaping the urban landscape, and the role of cities in determining the geography, sustainability, and business of agriculture.

PSUS 6215. Urban Health Impact Assessment. 3 Credits.

Examines the relationship between the allied fields of urban planning and public health. Addresses the link between the built environment and various health outcomes and the value added incorporating health concerns into the planning and design processes.

PSUS 6216. Megacities in a Globalized World. 3 Credits.

Research-oriented course in which students identify, analyze, and recommend ways of addressing land use change and economic development within one of the world's megacities.

PSUS 6218. Urban Growth and Affordable Housing. 3 Credits.

Real estate economics, with an emphasis on urban growth and affordable housing; the process and outcome of economic development and the relationship between economic development and sustainable urban planning.

PSUS 6220. Planning Resilient and Low-Carbon Cities. 3 Credits.

International perspectives on urban planning, taking into consideration increased global temperatures resulting from greenhouse gas emissions-induced climate change. The course is taught with reference to the findings of the Intergovernmental Panel on Climate Change (IPCC) and considers how urbanization around the world must adapt to the reality of global warming and its consequences.

PSUS 6221. The Scientific Basis of Climate Change. 3 Credits.

The science underlying climate change policy and decision making. Earth systems, climate change projections, the need for mitigation, and impact assessment. Designed for non-scientists.

PSUS 6222. Climate Change Economics. 3 Credits.

Energy use in built environments with an emphasis on fundamental drivers of energy demand, strategies to promote energy efficiency, and essential features of energy supply; the relationship between energy demand and supply in development.; how advances in construction technology can help counter greenhouse gas emissions.

PSUS 6223. Sustainable Communities II: Tools for Assessment and Transformation. 3 Credits.

Builds on PSUS 6212 by further detailing the theory and tools relevant to the assessment and transformation of neighborhood and communities. Geospatial analysis explore the fundamental drivers of urban form, advanced transportation systems, theories of change, and various impact assessment tools used to inform policy implementation.

PSUS 6224. Sustainable Energy for Cities and the Environment. 3 Credits.

Resource management and renewable energy technologies. Vulnerabilities of existing urban structures, particularly the energy grid. Implications of and solutions to energy-related problems likely to arise in present and future cities.

PSUS 6228. Open Space and Public Facilities Planning. 3 Credits.

Relevant skills applicable to urban park planning. Students learn site assessment and analysis tools and produce a professional quality project.

PSUS 6230. Sustainable Community Design Studio. 3 Credits.

Students gain practical experience by applying research skills and creativity to analyze and resolve a real-world urban issue. Prerequisites: PSUS 6201, PSUS 6202, PSUS 6203, PSUS 6204, PSUS 6210, PSUS 6211, PSUS 6212, PSUS 6220, and PSUS 6221.

PSUS 6231. Practicum:ClimateChangeMgt&Pol. 3 Credits.

PSUS 6233. Capstone in Sustainable Urban Planning. 3 Credits.

The SUP Capstone is a self-paced project specific to individual students, conducted under the supervision of a faculty member/s of the student's choice. The capstone is a significant piece of research that ties the student's broader experience in the Sustainable Urban Planning Program together – and brings their cumulative learning to bear on a research question / topic / project of their choice and definition. The capstone is intended to be a piece of exemplary work that the student can use to help them get to the "next level." That is, the capstone is a project that demonstrates the students capabilities and ability to work independently – it might be used, for example, as a sample of work in the job application process. Capstone projects may take the form of academic research papers; applied policy briefs; posters; executive training courses; and more. The capstone is no less (and no more) than a full semester's worth of intensive work on a particular project; it is NOT a thesis, as defined by the George Washington University. Ideally, the capstone project is of sufficient quality that it is worth of being presented at a meeting of the American Planning Association (local chapter or national meeting) or other relevant professional context.

PSUS 6235. Advanced Topics in Urban Sustainability. 3 Credits.

PSUS 6236. International Studio in Sustainable Urban Planning. 3 Credits.

International immersion designed to promote an international exchange of research and scholarship on sustainable urban development and provide instruction on operating in a foreign setting.