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DOES THE BUILT ENVIRONMENT INFLUENCE PHYSICAL ACTIVITY?
EXAMINING THE EVIDENCE

Promoting Interdisciplinary Curricula and Training in Transportation, Land Use, Physical Activity, and Health

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EXECUTIVE SUMMARY

This paper examines the extent to which the teaching and research mission of the U.S. academy addresses concerns about the connections between the built environment and health. Recognizing that the base of theory and scientific evidence is still underdeveloped, nonetheless the aggregative work is sufficiently plausible that prudence requires that we move ahead with creating new interdisciplinary programs to address these important connections.

We recommend applying the “best principles” derived through experience, even as we strive to further detail and rigorously test apt conceptual models through focused research and evaluated interventions to extend the base of science. Best principles as distinct from the more customary term “best practices” are used to underscore the need to extract the core issues from the context in which they are taught. This is especially true at an early stage of program development. We are confronting situations in which institutional settings vary greatly, even as the ostensible pedagogic and research activities are the same. Best principles are invoked to remind us that as we proceed to create new programs, institutional settings will be critically different, even though the resultant interdisciplinary programs that we are seeking will have underlying and readily adaptable common principles.

This analysis draws upon the published literature, an examination of existing joint degree program descriptions, our own experiences, and interviews with program directors, curriculum developers, and other thought leaders. Our general finding is that although there is widespread interest in this topic and a strong demand for professionals trained in interdisciplinary programs, little in the way of interdisciplinary education exists. We were unable to find any published articles on pedagogy that addressed this concern. This finding should not be surprising. The paucity of results merely serves to underscore the validity of the concerns that led to the creation of a joint Transportation Research Board (TRB) and Institute of Medicine (IOM) Committee on Physical Activity, Health, Transportation, and Land Use to explore the intersections between these fields.

We contend that in order for the academy to make enduring contributions to the important health challenges resulting from the current wave of global urbanization, it must develop programs that are truly interdisciplinary in both form and content. “Interdisciplinary” programs involve a transformative experience among the involved faculty and students. An interdisciplinary program is one that in some qualitatively significant manner dissolves the boundaries of the original disciplines, and contributes to the emergence of an integrative approach to both research and pedagogy that is not possible through more customary forms of academic cooperation by “experts” from different fields.

“Multidisciplinary,” “cross-disciplinary,” and “trans-disciplinary” are descriptors of more commonplace situations found in most university offerings in the fields that we surveyed that cut across disciplinary boundaries. In these cases, participants contribute their expertise to a particular circumscribed research or teaching challenge, but they do not change either the research questions they ask or the methods they use to investigate them in any significant way. Further, they do not view themselves as involved in an evolutionary process that is changing the nature of the academic mission in qualitative or quantitative terms. The end result of such more “typical” ventures is typically a collaborative solution to a specific problem, not a restructuring of the organization of the academic enterprise. By comparison, the type of interdisciplinary cooperation we describe can lead to institutional and structural change.

We strongly emphasize that in our view, all types of approaches (interdisciplinary as well as multidisciplinary, cross-disciplinary, and trans-disciplinary) are important. All of them “add value.” However, if one believes that these interrelationships are substantive and worthy of sustained academic inquiry, then the only way to provide the necessary educational training and academic research will be through the creation of new interdisciplinary programs that give permanence to these endeavors within the academy. At present, little evidence of existing interdisciplinary programs could be found in our web-based searches. We see this as the urgent challenge that needs to be addressed by the academy.

Due to our current pedagogic interests (urban planning and public health), we elected to conduct a search for programs that combined education and/or training in these already interdisciplinary fields. Our research was organized around a web-based search for joint programs. We began with a list of accredited schools from the Association of Collegiate Schools of Planning (ACSP) website. The collected data were analyzed as to program content. Of 70 programs accredited by the Planning Accreditation Board, we identified over 20 (just over 30%) that attempt to address this linkage via some form of a combined disciplinary educational program.

While we are heartened by this strong showing, we do not believe it is enough. The joint programs we discovered cannot in their present state be construed as the foundation for the thriving interdisciplinary academic enterprise that will be needed to meet the challenge of a rapidly urbanizing planet. We identified two serious gaps that must be addressed if the long-term goal of the present effort is to transform these important connections into a substantive field of professional training and academic inquiry. The first is immediate and the second is longer term.

The immediate challenge is to begin the process of creating an institutional atmosphere that can foster more interdisciplinary programs over time. One of the best ways to jump-start this process is via the creation of capstone courses at all academic levels—undergraduate, masters, pre-doctoral, and postdoctoral—where combined disciplinary programs now exist. A capstone course building exercise could help to establish the ongoing and vital collaboration amongst faculty in presently separate fields to create sustainable interdisciplinary programs. Over time, it is only via this type of internal and collaborative collegial synergy that we can create and sustain the needed resources for taking this approach the all-important next step.

The longer term challenge concerns building a generic core for interdisciplinary teaching and research. Our “ideal” interdisciplinary core is envisioned as having four generic “courses” to be engaged in sequentially. The four core course sequence we are proposing is derived from the ongoing work in which we are engaged to create interdisciplinary education and training within our home institution (Columbia University). Although titles will vary by institutions and programs, the ones below are our tentative titles for our planned interdisciplinary curriculum in the built environment and public health. They are presented for illustrative purposes only, and are not meant to be directive. The important point about interdisciplinary pedagogy around transportation, land use, physical activity, and health that we want to stress is that the *process* of change in the academy is as serious a consideration as the end product in terms of course mixes and research ventures.

With these caveats in mind, the core content of our “ideal” interdisciplinary curriculum consists of the following topics and titles:

1. **HISTORY** Historical perspectives on urban planning and public health.
2. **THEORY** Concepts and theories in transportation, land use, and population health.
3. **METHODS** Research designs, methods, and approaches for studying the effects of the built environment on population health.
4. **TOOLS** Research and policy tools used to intervene on the built environment to improve public health.

We claim no originality for this set of core courses or the sequence *per se*. The principle we wish to illustrate is the need to ground the interdisciplinary science and scholarship in a fuller history as documented through multiple disciplines as well as a strong base in theory, methods, and tools that cut across disciplinary boundaries.

We identified four impediments to interdisciplinary work that are common in academic institutions, presented below.

1. While there are always individual scholars and scientists within traditional social, physical, and health science programs that seek to push out the boundaries of their work to take in related fields, this is almost never a reflection of the mainstream within these fields. The career trajectories of these scientists, especially those at junior levels of appointment, are made more difficult by the extent to which they venture into such interdisciplinary work.
2. There are serious impediments to the creation of interdisciplinary programs that are structural to the present operation of institutions of higher education. These include:
 - The existing disciplinary boundaries that define what is acceptable and unacceptable scholarship within existing departments;
 - The existing structures of internal and external funding agencies and organizations that largely follow these boundaries;
 - The process of faculty appointments and promotions when institutions attempt to create new synergies via joint appointments, that is:
 - Poorly designed programs of initial recruitment of jointly appointed interdisciplinary faculty; and
 - Poorly designed processes of interdisciplinary reviews for promotion and tenure for jointly appointed faculty.
3. There is a lack of a critical mass of external foundation and public sector grant support to begin to shift some of the internal research and teaching priorities.
4. Service learning receives little academic credit, which tends to push up against the tensions between methodological rigor and social relevancy.

Notwithstanding these impediments, we made a series of recommendations for fostering curricula and training in transportation, land use, physical activity, and health. Our suggestions are grouped into strategies at three different levels, that is, broad-based policy recommendations, focused policy recommendations, and institutional change recommendations, presented in turn next.

Broad-Based Policy Recommendations

1. Interdisciplinary programs that link transportation, land use, physical activity, and health should be fostered at all four levels of higher education (undergraduate, masters, pre-doctoral, and postdoctoral level training).

2. Programs at the undergraduate and masters level should focus on preparing students for careers in both the public and private sectors, where addressing these linkages is now an everyday “fact-of-life.” Among the careers where training in this emerging interdisciplinary field are most obviously in place are real estate development (including banking and other investments that touch upon real estate development), architecture and urban design, infrastructure and land use planning, public health, medicine, law, physical education, and environmental science.

3. Academic institutions concerned with fostering interdisciplinary programs on transportation, land use, physical activity, and health should strive to create connections with the employers and industries seeking more broadly trained individuals.

4. Programs at the pre-doctoral and postdoctoral levels should focus on education and training researchers capable of designing and carrying out research that can more precisely evaluate the relationships between transportation, land use, physical activity, and health. These programs would do well to recruit among students with strong interests in the social sciences, medicine, public health, and the physical sciences. The interdisciplinary educational experience we recommend ought to not dilute these initial disciplinary interests, but it should address the need to balance them with a strong dose of training in the history, theories, methods, and tools of related disciplines.

5. It is imperative that interdisciplinary programs move beyond “brochure” programs to involve the participation of interdisciplinary faculties that truly work together and understand the concerns of other vital fields.

6. We must be careful in our invention of new masters and pre-doctoral programs that we not leave people out of the already established professions such as public health, urban planning, and exercise science. Instead, we should seek to push out the boundaries of training and practice in these fields.

Focused Policy Recommendations

1. Start with training postdoctoral candidates who have already earned a recognized disciplinary focus, *not* with masters and pre-doctoral candidates who have yet to achieve an accepted degree. The Robert Wood Johnson Foundation’s Health and Society Scholars Program serves as an apt and current postdoctoral program model.

2. Create forums within institutes for interdisciplinary scholars and scientists to learn more about each other’s work and initiate interdisciplinary research efforts. Our ongoing university seminar entitled “Urbanism and Public Health” is one such forum (see www.columbia.edu/cu/seminars/).

3. Encourage joint masters programs or individual masters programs with concentrations, e.g., joint MSUP and MPH degree programs.

4. Create undergraduate concentrations and courses in transportation, land use, physical activity, and health to emphasize the broad societal implications of an interdisciplinary approach,

including consumer preferences, marketing, and social marketing approaches in relation to physical activity behavior and travel and location choices.

Institutional Change Recommendations

1. Leadership must reside at the highest levels within the university. There is something almost tautological in making this recommendation. Nonetheless, it is simply the case that unless there is strong support from the top down, the normal processes of university life easily conspire against the kinds of new teaching and research configurations that interdisciplinary education and training require.

2. Universities seeking such change can establish a series of internal small seed grants to foster interdisciplinary cooperation regarding the nexus of fields under consideration here.

3. External foundations can (and do) similarly support these types of effort by the terms of the challenge and training grants they make available to institutions that can demonstrate that they have created the needed internal collaboration for interdisciplinary education.

If interdisciplinary programs at all levels of higher education are to endure, there must be a labor market for the services of people with the requisite training. We believe that these career paths already exist and that they will become stronger over the years as the connections between the built environment and population health become clearer. Given the preponderance of evidence to date, it is more reasonable to assume that the case for linkage will become stronger and more precise rather than the opposite.

To the extent that this intersection is deemed important for meeting the needs of society, it follows that the academy needs to take steps either via internal transformation or via external funding through the carrots of grants and other incentives to begin to establish the necessary arrangements for faculty and students to work in new interdisciplinary areas in order to produce well-trained professionals to meet the challenge of this intersection and to provide the needed research to guide policy and planning in this all important area. The recognition of a need is only a necessary condition for change; sufficiency requires that the process of academic institutional change be considered as integral to meeting the need as the research and teaching that will flow from the change.

FORWARD: AN URGENT CHALLENGE TO THE ACADEMY

Efforts to understand and control the connections between the built environment and public health are not new (Sclar and Northridge 2001). What is new is the global magnitude of the population health crisis that is in some way linked to the condition of the built environment. Approximately 40% of the world's population lives on less than US\$2 per day (Sachs 2004). About one-half of the world's 6 billion people now live in urban areas, and nearly 1 billion of these urban dwellers live in slums—places characterized by inadequate provision of basic infrastructure and public services necessary to sustain health, such as water, sanitation, and drainage (NRC-NA 2003; UN-HABITAT 2003; Sclar and Northridge 2003). Simply put, the need to understand and control the ways in which the built environment affects population health is now literally a subject with massive implications for life and death for millions of people.

These concerns range from the pressing challenges of HIV/AIDS to the long-term population health implications of obesity (Sclar 1990; Northridge and Sclar 2002).

Clearly, meeting this challenge is going to take an unprecedented investment of resources. Key to the successful deployment of these resources will be a cadre of trained professionals bolstered by the best scientific research to design and implement programs to overcome the potentially cataclysmic effects of the current wave of global urbanization. The quality of professional training and education will depend critically upon the ability of the academy to recognize and address this global challenge through interdisciplinary approaches.

While the challenge appears daunting, it is important to remember that—in an historic sense—we have seen it all before. The squalid conditions of urban life in the industrialized cities of Europe and the United States that began to appear in the middle of the 19th century and which gave rise to infectious disease outbreaks, social unrest, and class conflict (Krieger and Higgins 2002) also gave birth to the modern professions of urban planning and public health. Both professions—with their strong bases of teaching and research in the academy—had their roots in a social justice mission to help ameliorate these urban environmental, social, and population health problems (Engels 1845; Krieger and Birn 1998). These and other fields and disciplines are now challenged to understand the ways in which the built environment contributes to or inhibits long-term population health and well-being. If the academy is to be effective in this endeavor, then we must learn how to bring education and research together across disciplinary boundaries to address these global priorities (Northridge and Sclar 2003). Technological advances provide opportunities, whereas social conditions provide challenges that are both unique to and stubbornly persistent in every generation.

While the base of theory and scientific evidence that can connect *specific* design configurations of the built environment to *specific* use patterns and hence *specific* exposure to dangerous toxins or inadequate physical exercise and ultimately to *specific* population health outcomes is lacking (Northridge, et al. 2003), the aggregative correlational work completed to date is sufficiently plausible and robust in its broadest causal outlines and preliminary findings that prudence requires us to act by integrating knowledge across sectors to guide proposed projects and policies (Craig, et al. 2002). We recommend applying the “best principles” derived through experience even as we strive to further detail and rigorously test apt conceptual models through focused research and evaluated interventions (Schulz and Northridge, in press). It is upon this rationale that we press ahead with academic programs to reshape the training and education of new generations of practitioners, scholars, and scientists in urban transportation planning, public health, exercise science, public administration, medicine, dentistry, architecture, environmental science, engineering, and other related fields. Improved interdisciplinary education and research is vital if we are to better understand and meaningfully act upon the linkages between transportation, land use, physical activity, and population health.

OBJECTIVES

Drawing upon the published literature, joint degree program descriptions, our own experiences, and interviews with program directors, curriculum developers, and other thought leaders, this paper will:

1. Summarize and evaluate the present state of academic pedagogy with regard to transportation, land use, physical activity, and health;
2. Identify and describe “best principles” and examples of education and training programs at the undergraduate, masters, pre-doctoral, and postdoctoral levels with regard to these fields;
3. Discuss the capstone experience and core content of an “ideal” interdisciplinary curriculum devoted to transportation, land use, physical activity, and health;
4. Summarize the impediments to and recommendations for fostering interdisciplinary curricula and training in the academy; and
5. Suggest how interdisciplinary curriculum development and training might be advanced so that current and future professionals are better informed about the connections between transportation, land use, physical activity, and health.

SUMMARY OF THE PRESENT STATE OF ACADEMIC PEDAGOGY WITH REGARD TO TRANSPORTATION, LAND USE, PHYSICAL ACTIVITY, AND HEALTH

The decline in habitual physical activity with modernization (Sparling, et al. 2000) and the linkage between physical activity and individual health is well documented (US-DHHS 1996). By extension, the linkage between population-based changes in physical activity and the health and well-being of the public has also been demonstrated (Rose 1985), even as it has been difficult to precisely quantify due to the lack of long-term data (Brownson and Boehmer 2003). The decisions of individuals to commit themselves to lifestyles that include beneficial physical activity are influenced in part by their racial/ethnic, social, cultural, educational, and economic backgrounds and present circumstances (Bowser 2003). But it is also the case that any resulting actions from these decisions may be either constrained or encouraged by the shape and structure of the physical environments in which individuals are situated (Frumkin 2003), including the safety of neighborhood surroundings (Loukaitou-Sideras 2003) and home age as a proxy measure of urban environment and walking behavior (Berrigan and Troiano 2002).

Scholars and practitioners in the field of exercise science know a great deal about the effects of alterations in physical activity on individual health and well-being (Wang, et al. 2002; Ainsworth and Youmans 2002). They also know a great deal about the psychology of active and inactive people (Motl, et al. 2002; Lewis, et al. 2002). But while the link between the built environment and human behavior has long been of interest to the field of urban planning, direct assessments of the links between the built environment and physical activity as it influences personal health are still rare in the field (Handy, et al. 2002).

Epidemiologists and other population health specialists possess the methodological capacity to carefully monitor and analyze population-based surveillance data in order to assess the impact of aggregate changes in physical activity on the physical and mental health of different population groups that are socially defined by, e.g., race/ethnicity, gender, and social class (Boarnet 2003; Diez-Roux 2003; Evans 2003; Krieger, et al. 2003). Environmental scientists and urban planners who are expert in land use and transportation analysis can estimate the changes in trip generation, walking, and driving created by alternative configurations of land use and transportation infrastructures (Handy 1996; Handy 2003; Frank and Engleke 2000; Ewing and Cervero 2001). Such changes have clear implications for both individual and population health and well-being.

To the extent that as a matter of public policy we seek to shape the built environment to ensure that it facilitates physical activity which contributes to improved health outcomes (Meyer 2003; Savitch 2003), it is necessary that we begin to shape interdisciplinary programs to train professionals in the fields of exercise science, public health, civil and transportation engineering, and urban planning in ways that allow them to root their practices in the knowledge bases of these and related disciplines. While the science is still at an early stage of development, we believe that it is possible to train professionals, e.g., civil engineers in the public and private sectors, bicycle and pedestrian coordinators within state and local agencies, in interdisciplinary teams using “best principles” from research and policy initiatives for sustainable development and population health, e.g., conducted using participatory research methods with the active participation of affected populations (Shepard, et al. 2002; Corburn 2002). In this way, we can help promote the evolution of a new generation of professionals that will make important contributions to the creation of 21st-century cities and suburbs that—via their shapes and spatial configurations—lead to healthier communities, healthier homes, and healthier people (Srinivasan, et al. 2003).

The problem, of course, is that even with the purest of sciences and rational policy and planning processes, there is still a great deal that is not well understood about the linkages between the built environment and population health (Srinivasan, et al. 2003; Dannenberg, et al. 2003; Fox, et al. 2003; Jackson 2003). As a result, there is a great deal of room for differences which continue to play themselves out in the politics of decision making in both the academy over the development of interdisciplinary courses, and in the public policy arenas concerned with the connections between transportation, land use, physical activity, and health (Librett, et al. 2003). To summarize the present state of the academic enterprise *with regard to pedagogy* related to transportation, land use, physical activity, and health, we looked for documentation in the peer reviewed literature, as detailed next.

Literature Review for Pedagogy and Program Curricula

We conducted a literature review to determine the extent of the published record of pedagogy and program curricula designed for the intersection of transportation, land use, physical activity, and health issues, especially curricula in combined urban planning and public health programs. Our search included the following peer-reviewed publications:

- *American Journal of Health Promotion*
- *American Journal of Preventive Medicine*
- *American Journal of Public Health*
- *Education and Urban Society*
- *Education Philosophy and Theory*
- *Educational Review*
- *Health Education*
- *Journal of Planning and Education Research*
- *Journal of Planning History*
- *Planning Perspectives*
- *Planning, Practice, and Research*

Journals were searched for articles including the following key words:

- Curriculum,
- Dual degrees,
- Joint degrees,
- Pedagogy,
- Physical activity,
- Planning,
- Public health, and
- Transportation.

Despite contemporary calls to reconnect urban planning and public health (Greenberg, et al. 1998; Greenberg, et al. 2003; Sclar and Northridge 2001; Northridge and Sclar 2003; Northridge, et al. 2003; Corburn 2004) and employ theoretical approaches that synthesize and systematize research data from different lines of research (Dannenberg, et al. 2003), no pedagogy articles addressing these search terms were located. Nonetheless, we were directed to a thoughtful peer-reviewed paper that examined training courses for researchers and practitioners around physical activity and public health (Brown, et al. 2001), several websites that list potentially useful training courses for researchers and practitioners related to physical activity and public health (prevention.sph.sc.edu/seapines/index.htm, www.health.vic.gov.au/activeforlife/physact, and www.staffs.ac.uk/schools/sciences/distlearn/health/pubhealth.php), as well as an experimental course on transportation, planning, and urban sustainability (www.iastate.edu/~catalog/exp/exdef.html) and a proposed college-level course in cycling (www.johnforester.com/Articles/Education/univcyc.htm).

There remains the additional (likely futile?) task of conducting an exhaustive literature review incorporating related terms (syllabus, prospectus) and allied disciplines (exercise science, environmental science). *Nonetheless, based upon our preliminary findings, we do not expect to find much—if any—additional literature on pedagogy related to the connections between transportation, land use, physical activity, and health.* This conclusion should not be surprising. The paucity of results merely serves to underscore the validity of the concerns that led to the creation of a joint TRB and IOM Committee on Physical Activity, Health, Transportation, and Land Use to explore the intersections between these fields.

INTERDISCIPLINARY EDUCATION AND TRAINING PROGRAMS AT THE UNDERGRADUATE, MASTERS, PRE-DOCTORAL, AND POSTDOCTORAL LEVELS WITH REGARD TO TRANSPORTATION, LAND USE, PHYSICAL ACTIVITY, AND HEALTH

Invoking “Best Principles”

Despite the lack of conclusive evidence that precisely implicates specific aspects of the built environment as being directly responsible for specific health outcomes, a starting premise for new academic programs can rest upon the precautionary principle, which has been proposed as a fundamental guideline in environmental decision-making. According to Kriebel, et al., the precautionary principle has 4 central components, namely: (1) taking preventive action in the face of uncertainty; (2) shifting the burden of proof to the proponents of an activity; (3) exploring a wide range of alternatives to possibly harmful actions; and (4) increasing public participation in

decision making (Kriebel, et al. 2001). The precautionary principle is especially relevant for the broad arena of the built environment and public health, as it may be invoked to ensure that both private developers and public agencies consider the possibly untoward effects of large-scale construction projects before they are undertaken, as in health impact assessment (Krieger, et al. 2003).

In light of the ambiguity that must surround policy-oriented programs in transportation, land use, physical activity, and health, we stress the need to develop such programs with an emphasis on “best principles,” including the precautionary principle just discussed. The term “best principles” is invoked here rather than the more customary term “best practices” in order to underscore the need—especially at an early stage of development of new education and training programs in transportation, land use, physical activity, and health—to extract the core issues from the context in which they are taught. In the development of new educational programs, we are confronting situations in which institutional settings will vary greatly, even as the ostensible pedagogic and research activities are the same. In such cases, best practices do not always easily transfer across either disciplinary or institutional boundaries. Best principles are invoked to remind us that while institutional settings can be critically different, the encompassed interdisciplinary programs that we are seeking have underlying principles that can be readily adapted. The application of best principles requires that we develop a more critical understanding of the goals and constraints of different academic organizational structures as we develop new programs. Put slightly differently, *process* is as important as *plan* in the creation of innovative interdisciplinary programs to address the challenges of population health and the built environment.

What We Mean by “Interdisciplinary”

If meaningful academic programs to address the challenge of population health, physical activity, and the built environment are deemed important, it is necessary to be precise about our expectations for these programs. In this regard, there is a strong need for a typological clarity of concepts among the programmatic alternatives. Below we consider the substantive meaning of interdisciplinary programs. In ordinary parlance, the term “interdisciplinary” is often used interchangeably with the terms “multidisciplinary,” “cross-disciplinary,” and “trans-disciplinary.” According to the dictionary, *inter-* means between or among, mutually or together. *Multi-* indicates much or many, or more than one. *Cross-* signifies intersecting, contrary or counter, or opposing. Finally, *trans-* means across or over, beyond or above. While these latter terms are related to *inter-*, they fail to represent the sorts of collaborations that may potentially foster new fields from the genuine melding of histories, theories, methods, and tools.

We contend that in order for the academy to make enduring contributions to the challenges resulting from the current wave of global urbanization, it is important that the programs that emerge are truly interdisciplinary in both form and content. For us, the term “interdisciplinary” defines academic programs that involve a transformative experience among the involved faculty and students. An interdisciplinary program is one that in some qualitatively significant manner dissolves the boundaries of the original disciplines, and contributes to the emergence of an integrative approach to both research and pedagogy that is not possible through more customary forms of academic cooperation by “experts” from different fields. In many ways, the contemporary fields of urban planning and public health—wherein the authors’

“home” disciplines of economics and epidemiology reside—are historically evolved exemplars of such transformation.

“Multidisciplinary,” “cross-disciplinary,” and “trans-disciplinary” are descriptors of more commonplace situations found in most university offerings in the fields that we surveyed that cut across disciplinary boundaries. In these cases, participants contribute their expertise to a particular circumscribed research or teaching challenge, but they do not change either the research questions they ask or the methods they use to investigate them in any significant way. Further, they do not view themselves as involved in an evolutionary process that is changing the nature of the academic mission in qualitative or quantitative terms. The end result of such more “typical” ventures is a collaborative solution to a specific problem, not a restructuring of the organization of the academic enterprise. By comparison, the type of interdisciplinary cooperation we describe can lead to institutional and structural change.

This observation and the academic change it articulates is not meant to in any way denigrate these other approaches. We strongly emphasize that in our view *all* types of approaches (interdisciplinary as well as multidisciplinary, cross-disciplinary, and trans-disciplinary) are important as we move forward in programs to understand the connections between the built environment and population health. As discussed below, we found several examples of multidisciplinary, cross-disciplinary, and trans-disciplinary approaches to academic programs. All of them “add value.” Our only point is that if one believes that these interrelationships are socially substantive and important, then the only way to sustain both the necessary educational training and academic research will be through the development of new interdisciplinary programs that will give permanence to these endeavors within the academy. At present, little evidence of existing interdisciplinary programs could be found in our web-based searches. We see this as the urgent challenge that needs to be addressed by the academy.

Web-Based Search for Joint Programs on Urban Planning and Public Health

Due to our current pedagogic interests, we elected to conduct a search for programs that combined education and/or training in the already interdisciplinary fields of urban planning and public health. The methods used to conduct our web-based search for joint programs were straightforward. We began with a list of accredited schools from the Association of Collegiate Schools of Planning (ACSP) website (www.acsp.org/CareerInfo/Accredited_programs.html). Each school was entered into a spreadsheet, and the following information was collected for each school from its website, whenever possible:

- Bachelor of Arts (BA) or Bachelor of Science (BS) degree programs available;
- Masters of Arts (MA) or Masters of Science (MS) degree programs available;
- PhD degree programs available;
- Website address;
- Contact e-mail;
- Joint program with Masters of Public Health (MPH) available;
- Program emphasis or mission;
- Relevant coursework; and
- Special notes.

Once the data were collected and entered into a spreadsheet (see Table 1), the information was summarized, as per below.

Summary of Web-Based Search for Joint Urban Planning and Public Health Programs

Out of 70 schools surveyed, planning programs in the following 5 schools have established joint degree programs with a graduate program in public health:

- Columbia University,
- University of California at Berkeley,
- University of Iowa,
- University of Michigan, and
- University of North Carolina at Chapel Hill.

The following schools did not have joint degrees listed per se, but it was noted that joint degrees were possible with various departments, so there may be students pursuing joint degrees at these institutions:

- Clemson University,
- Massachusetts Institute of Technology,
- New York University,
- Ohio State University,
- University of Florida, and
- University of Oklahoma.

The following schools have joint degrees listed with departments other than public health, such as civil engineering and critical infrastructure planning:

- California Polytechnic State University, San Luis Obispo,
 - Tufts University,
 - University of California at Berkeley,
 - University of Nebraska at Lincoln,
 - University of Pennsylvania,
 - University of Virginia,
 - University of Washington (Masters in Strategic Planning for Critical Infrastructure),
- and
- University of Wisconsin at Milwaukee.

The following programs are located within a school that also houses a public policy or health policy program, or that offers a concentration in health planning:

- New York University,
- University of California at Irvine,
- University of Minnesota, and
- University of Southern California.

Synthesis and Conclusions of Web-Based Search

In our surveys and research into the question of existing pedagogy, the good news is that there is widespread awareness across the nation's academic institutions of the importance of meeting the educational needs of students interested in the nexus among transportation, land use, physical activity, and health. Of 70 programs accredited by the Planning Accreditation Board, we have identified over 20 (just over 30%) that attempt to address this linkage via some form of a combined discipline educational program. We are heartened by this strong showing, especially given the largely ad hoc way in which colleagues from different disciplines typically find each other in most academic settings.

Interviews with Program Directors, Curriculum Developers, and Other Thought Leaders

From our discussions with Barbara E. Ainsworth, PhD, MPH, Professor and Chair of the Department of Exercise and Nutritional Sciences at San Diego State University (the representative for this paper from the TRB and IOM Committee on Physical Activity, Health, Transportation, and Land Use) as well as other colleagues from around the nation and abroad, this finding is consistent with an emerging consensus that more work needs to be done in creating programs that build their educational mission around the built environment-population health nexus. For many of these colleagues, this is the next important challenge for training a new generation of specialists who focus on the environment and health.

The programs that focus most directly on the linkage between individual physical activity and specific aspects of the built environment demonstrate the most precision in terms of curricular content, questions posed, and research methods employed. This is undoubtedly a reflection of the fact that exercise science is more advanced in its understanding of cause and effect in the context of human activity than are programs that address the issue of connection at the policy level, such as those that emerge from urban planning and public health. These are not articulated in terms of interdisciplinary curricular consistency.

The bulk of the programs that we were able to examine via a scan of websites do not appear to be interdisciplinary, as much as they appear to be formal multidisciplinary (most common), cross-disciplinary (less common), or trans-disciplinary (less common still) arrangements among existing programs within their respective universities. These programs, which exist mainly in brochures and bulletins, operate by identifying courses within the existing degree programs that might be of interest to students seeking a broader and more multidisciplinary basis for their professional training. The arrangements spelled out in the websites, bulletins, and brochures attempt to provide students with a rational and orderly way in which to realize their interdisciplinary interests within existing programs. We term these "brochure programs." The term is not meant as a pejorative. Rather, we intend it as an accurate description of programs that fill an important educational niche. The alternative to such programs would be that virtually nothing at all would exist to fill a present and pressing void. These programs create a more efficient use of existing institutional resources and extend the range of their applicability to the emerging needs of students seeking an interdisciplinary education in the absence of that opportunity.

Education and Training Programs Related to Transportation, Land Use, Physical Activity, and Health

Two programs that are focusing on connections between the built environment and public health include: (1) a collaboration between the Edward J. Bloustein School of Planning and Public Policy (Bloustein School) of Rutgers University (Rutgers) and the University of Medicine and Dentistry of New Jersey (UMDNJ) School of Public Health in New Brunswick; and (2) the Healthy Places Research Group, an informal collaboration of faculty, staff, and students at three institutions in Atlanta, Ga. We asked two of the involved academic leaders to highlight the ways that they are trying to make connections among schools and between disciplines at their institutions of higher learning. Their generous responses follow next.

Michael R. Greenberg, PhD, Associate Dean of the Faculty, Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey:

“The Edward J. Bloustein School of Planning and Public Policy of Rutgers University and the UMDNJ School of Public Health (SPH) [formerly a program in public health] have had a working relationship for over 20 years. Planning students have been able to avail themselves of courses in environmental health, epidemiology, and risk assessment, and students in the SPH frequently take courses in the planning and policy programs at the Bloustein School. For example, my course in urban redevelopment and community health had five SPH students in it when it met for the first time last night. In fact, the Bloustein School is the main Rutgers sponsor of the SPH, and I am the official Rutgers liaison to the SPH. So there is a formal relationship.

We work on research projects together, guest lecture in each other’s classes, and serve on MPH, PhD, and hiring committees together. With regard to PhD students, for example, I am the main adviser of Fred Ellerbusch, who is a PhD student in the SPH. Fred’s thesis examines health and regulatory challenges related to putting housing on brownfield sites.

The relationship is not perfectly seamless, but it is relatively so. Nearly all of the senior researchers in the SPH are members of the Rutgers graduate faculty via my nomination, and Associate Dean George Rhoads, my counterpart at UMDNJ, has created coterminous appointments for Professor Dona Schneider, me, and other colleagues in my school who contribute to the SPH.

Currently, we are working on a certificate program in health communications that would involve the SPH, the Bloustein School, Cook College, and the Communication School at Rutgers. This does not focus directly on design and public health, but the point is that we are able to create programs for students and opportunities for research.”

Howard Frumkin, MD, DrPH, FACP, FACOEM, Professor and Chair, Department of Environmental and Occupational Health, Rollins School of Public Health of Emory University, Professor of Medicine, Emory Medical School:

“The Healthy Places Research Group (HPRG) is an informal collaboration of faculty, staff, and students at three institutions/agencies: (1) the College of Architecture at the Georgia Institute of Technology (Georgia Tech)—including the Architecture Program, the City and Regional Planning Program, and the newly established Center for Quality Growth and Regional Development; (2) the Rollins School of Public Health at Emory University; and (3) the Centers for Disease Control and Prevention (CDC)—with staff representing both the National Center for Environmental Health and the National Center for Chronic Disease Prevention and Health

Promotion. We meet monthly to discuss ongoing research that spans our interests. Projects currently under discussion include a study of urban park design in relation to physical activity (funded by the Robert Wood Johnson Foundation), an evaluation of the Buford Highway corridor redesign in terms of health implications (involving Georgia Tech faculty and staff), a study of willingness-to-pay among potential homebuyers along a multi-use trail (an Emory MPH thesis project), a study of social capital in relation to commute time (another Emory MPH thesis topic), a study of building design in relation to physical activity (again involving Georgia Tech faculty), a study of health benefits of hospital gardens (yet another Emory MPH thesis topic), and a methodological review of health impact assessment (a joint CDC-Georgia Tech-Emory initiative). We are incubating further research projects and will develop joint coursework through ongoing meetings of the HPRG. A long-range goal under consideration is a joint degree program in City and Regional Planning and Public Health.”

Modules and Courses on the Intersections among Transport, Land Use, Physical Activity, and Population Health

There has been a call for the academy to be more “practical.” For example, it has been argued by members of the committee that commissioned this report that current curricula in the urban planning and civil engineering fields could each benefit from having a module that addresses the link between transportation, land use, and public health without necessarily having a “full-blown” interdisciplinary program.

In addition to programs and modules on these connections, certain classes that deal with the intersections among transportation, land use, physical activity, and health were found during our web-based search, six of which are listed next as examples.

1. **Texas A&M University in College Station** *Planning for Healthy Communities* (PLAN 633 is cross-listed with BUSH 662 at the George Bush School of Government and Public Service). An introduction to issues involved in planning healthy cities/communities; by exploring experiences initiated by the World Health Organization and subsequent international experiences, attention is given to the healthy cities/communities movement in the United States and the case studies of programs at local, state, and national levels.

2. **University of North Carolina at Chapel Hill** *Public Investment Theory, Pedestrian and Bicycle Seminar*. Students seeking careers in public health will learn how to shape the physical and social urban community in health-enhancing ways. This combination of skills will help forge broader and more powerful alliances that promote public health, safety, and livability in American communities.

3. **University of Maryland at College Park** *Human Behavior and the Physical Environment* (URSP 607). Theories and research about ways human-produced environments change and are changed by the behavior of individuals and groups.

4. **University of Virginia in Charlottesville** *Healthy Communities*. Explores the relationship between planning and human health drawing on interdisciplinary perspectives.

5. **Columbia University in New York** *Urban Environmental Planning: The Basis in Public Health* (PLA4540, an interdisciplinary course of the Urban Planning Program of the Graduate School of Architecture, Planning and Preservation, the Masters in Public Administration Program of the School of International and Public Affairs, and the Department of Sociomedical Sciences of the Mailman School of Public Health). This course covers the major

theories, concepts, and methods of public health research and practice relevant to urban planning by providing an historical basis for the topics discussed, as well as current applications.

6. **Rutgers, The State University of New Jersey in New Brunswick** *Protecting Community Health*. This is one of the few undergraduate courses that focus on public health and the environmental implications of redevelopment. The course is about the multitude of factors that influence the environments of our neighborhoods and our environmental health.

THE CAPSTONE EXPERIENCE AND CORE CONTENT OF AN “IDEAL” INTERDISCIPLINARY CURRICULUM DEVOTED TO TRANSPORTATION, LAND USE, PHYSICAL ACTIVITY, AND HEALTH

Going forward, while the joint programs we found during our web-based search hint at, they cannot in their present state be construed as the foundation for the thriving interdisciplinary academic enterprise that will ultimately be needed to meet the challenge of our rapidly urbanizing planet. There are two serious gaps that must be addressed if the long-term goal of the present effort is to transform these important connections into a substantive field of professional training and academic inquiry. The first is immediate and the second is longer term.

The “Ideal” Capstone Experience

The immediate challenge is to begin the process of creating an atmosphere that can foster more interdisciplinary programs over time. One of the best ways to jump-start this process is via the creation of capstone courses at all academic levels, namely, undergraduate, masters, pre-doctoral, and postdoctoral. Because of its integrative nature, a capstone course can serve as a bridge that both help students and faculty to consolidate and integrate the knowledge they have gained.

As matters now stand, the existing multidisciplinary, cross-disciplinary, and trans-disciplinary programs do not effectively provide their students with such an explicit “capstone” experience. Academic institutions must take greater responsibility for helping their students construct an integrative interdisciplinary experience out of the individual interdepartmental offerings to which they were exposed. Absent such a cooperative capstone course, each student is left to define the nature of the interdisciplinary experience on her own. Thus, each is left to evaluate the usefulness of what she has learned for her future professional life based solely on whatever she initially brought to the experience, and the way in which she individually chooses to construe it. While that is not “bad” *per se*, as education is always an individual journey, it does leave much to be desired if we are seeking uniform and high professional standards for the careers these students will ultimately pursue. It leaves them bereft of the benefit of integrating their educational experience with that of the faculty who envisioned the broader connections in the first place. This problem is especially critical at the undergraduate and masters levels, where we are training people to move directly into career starting positions.

The absence of a consistent ongoing and vital collaboration amongst faculty in the presently separate fields means that an important opportunity to design and create the interdisciplinary research and scholarship is lost. Over time, it is only via this type of internal and collaborative collegial synergy that we create and sustain the needed resources for taking this approach the all-important next step.

Core Content of an “Ideal” Interdisciplinary Curriculum

Below we present the generic core content of our “ideal” interdisciplinary curriculum. These four courses are envisioned to be engaged in sequentially. They work at all levels of education as a structure, although the content would need to be geared to the appropriate level of education. In developing these core courses together, we hope to spark the sort of “collaborative collegial synergy” amongst faculty that we believe is critical for meaningful engagement of students across backgrounds and disciplines, and thereby elevate the science and scholarship of this newly emerging interdisciplinary field to the next level of rigor. These four core courses are derived from the ongoing work we are engaged in to create interdisciplinary education and training. Although we presume titles will vary by institutions and programs, the ones below are our own tentative titles for our planned interdisciplinary curriculum in the built environment and public health. They are presented for illustrative purposes only, and are not meant to be directive. Indeed, one problem with interdisciplinary pedagogy historically is that it has dealt overly much with *content*, and does not place needed emphasis on *process*. The important point about interdisciplinary pedagogy around transportation, land use, physical activity, and health that we want to stress is that the process of change in the academy is a serious consideration, not just the end product in terms of course mixes and research ventures.

With these caveats in mind, the core content of our “ideal” interdisciplinary curriculum consists of the following topics and titles:

1. **HISTORY** Historical perspectives on urban planning and public health, especially with regard to transportation and physical activity.
2. **THEORY** Concepts and theories in transportation, land use, physical activity, and population health.
3. **METHODS** Research designs, methods, and approaches for studying the effects of the built environment on population health.
4. **TOOLS** Research and policy tools used to intervene on the built environment to improve public health.

We claim no originality in suggesting this set of core courses or the sequence per se. Indeed, this recommendation closely parallels the current curriculum in both the Urban Planning Program at the Graduate School of Architecture, Planning and Preservation and the Urbanism and Community Health Track in the Department of Sociomedical Sciences of the Mailman School of Public Health at Columbia University. By integrating them, however, we gain the advantages of: 1) grounding our science and scholarship in a fuller history as documented through multiple disciplines, so that we might learn from the past rather than repeat the same mistakes over and over again, and thus have an opportunity to sustain progress in a coherent manner (Fee and Brown 2002); 2) asking new and different research questions brought about considering multiple and reinforcing concepts, theories, and frameworks, in order to deepen understanding and generate new ideas that can make a difference for the health and lives of the world’s burgeoning urban populations (Northridge and Sclar 2003; Northridge, et al. 2003; Krieger, et al. 2003; Krieger and Gruskin 2001); (3) utilizing a variety of research designs, methods, and approaches to developing, testing, validating, and disseminating research and policies that affect population health (Krieger, et al. 2003); and (4) incorporating advanced research tools such as geographic information systems and multilevel modeling, as well as policy

tools such as environmental impact reform (Northridge and Sclar 2003; Krieger, et al. 2003; NEPA 1970).

IMPEDIMENTS TO AND RECOMMENDATIONS FOR FOSTERING INTERDISCIPLINARY CURRICULA AND TRAINING IN TRANSPORTATION, LAND USE, PHYSICAL ACTIVITY, AND HEALTH

Having previously argued for the advantages of educating and training students in interdisciplinary research and practice devoted to transportation, land use, physical activity, and health, and recommending an “ideal” capstone experience and an “ideal” core content for an interdisciplinary curriculum, we next answer the question, “Why aren’t there more examples of interdisciplinary programs in academia?”

Impediments to Interdisciplinary Work

Drawing from our own experiences and interviews with program directors, curriculum developers, and other thought leaders, we have come up with the following list of impediments to interdisciplinary work.

1. While there are individual scholars and scientists within traditional social, physical, and health science programs that seek to push out the boundaries of their work to take in related fields in these areas, this is not a reflection of the mainstream within these fields. The career trajectories of these scientists, especially those at junior levels of appointment, are made more difficult by the extent to which they venture into such interdisciplinary work.
2. There are serious impediments to the creation of interdisciplinary programs that are structural to the present operation of institutions of higher education. These include:
 - The existing disciplinary boundaries that define what is acceptable and unacceptable scholarship within existing departments;
 - The existing structures of internal and external funding agencies and organizations that largely follow these boundaries;
 - The process of faculty appointments and promotions when institutions attempt to create new synergies via joint appointments, that is:
 - Poorly designed programs of initial recruitment of jointly appointed interdisciplinary faculty; and
 - Poorly designed processes of interdisciplinary reviews for promotion and tenure for jointly appointed faculty.
3. There is a lack of a critical mass of external foundation and public sector grant support to begin to shift some of the internal research and teaching priorities.
4. Service learning receives little academic credit, which tends to push up against the tensions between methodological rigor and social relevancy.

Recommendations for Fostering Interdisciplinary Work

Notwithstanding the serious impediments to interdisciplinary work just listed, we next provide our recommendations for surmounting these challenges and fostering curricula and training in transportation, land use, physical activity, and health. Our suggestions are grouped into strategies at three different levels, that is, broad-based policy recommendations, focused policy recommendations, and institutional change recommendations, presented in turn next.

Broad-Based Policy Recommendations

1. Interdisciplinary programs that link transportation, land use, physical activity, and health should be fostered at all four levels of higher education (undergraduate, masters, pre-doctoral, and postdoctoral level training).
2. Programs at the undergraduate and masters level should focus on preparing students for careers in both the public and private sectors, where addressing these linkages is now an everyday “fact-of-life.” Among the careers where training in this emerging interdisciplinary field are most obviously in place are real estate development (including banking and other investments that touch upon real estate development), architecture and urban design, infrastructure and land use planning, public health, medicine, law, physical education, and environmental science.
3. Academic institutions concerned with fostering interdisciplinary programs on transportation, land use, physical activity, and health should strive to create connections with the employers and industries seeking more broadly trained individuals.
4. Programs at the pre-doctoral and postdoctoral levels should focus on education and training researchers capable of designing and carrying out research that can more precisely evaluate the relationships between transportation, land use, physical activity, and health. These programs would do well to recruit among students with strong interests in the social sciences, medicine, public health, and the physical sciences. The interdisciplinary educational experience we recommend ought to not dilute these initial disciplinary interests, but it should address the need to balance them with a strong dose of training in the history, theories, methods, and tools of related disciplines.
5. It is imperative that interdisciplinary programs move beyond “brochure” programs to involve the participation of interdisciplinary faculties that truly work together and understand the concerns of other vital fields.
6. We must be careful in our invention of new masters and pre-doctoral programs that we not leave people out of the already established professions such as public health, urban planning, and exercise science. Instead, we should seek to push out the boundaries of training and practice in these fields.

Focused Policy Recommendations

1. Start with training postdoctoral candidates who have already earned a recognized disciplinary focus, *not* with masters and pre-doctoral candidates who have yet to achieve an accepted degree. The Robert Wood Johnson Foundation’s Health and Society Scholars Program serves as an apt and current postdoctoral program model.

2. Create forums within institutes for interdisciplinary scholars and scientists to learn more about each other's work and initiate interdisciplinary research efforts. Our ongoing university seminar entitled, "Urbanism and Public Health" is one such forum (see www.columbia.edu/cu/seminars/).
3. Encourage joint masters programs or individual masters programs with concentrations, e.g., joint MSUP and MPH degree programs.
4. Create undergraduate concentrations and courses in transportation, land use, physical activity, and health to emphasize the broad societal implications of an interdisciplinary approach, including consumer preferences, marketing, and social marketing approaches in relation to physical activity behavior and travel and location choices (Kirby 2003).

Institutional Change Recommendations

1. Leadership must reside at the highest levels within the university. There is something almost tautological in making this recommendation. Nonetheless, it is simply the case that unless there is strong support from the top down, the normal processes of university life easily conspire against the kinds of new teaching and research configurations that interdisciplinary education and training require.
2. Universities seeking such change can establish a series of internal small seed grants to foster interdisciplinary cooperation regarding the nexus of fields under consideration here.
3. External foundations can (and do) similarly support these types of effort by the terms of the challenge and training grants they make available to institutions that can demonstrate that they have created the needed internal collaboration for interdisciplinary education and training.

ADVANCING INTERDISCIPLINARY CURRICULUM DEVELOPMENT AND TRAINING TOWARD BETTER INFORMING CURRENT AND FUTURE PROFESSIONALS ABOUT CONNECTIONS AMONG TRANSPORTATION, LAND USE, PHYSICAL ACTIVITY, AND HEALTH

If land use and transportation decisions affect physical activity patterns, then the professionals responsible for these decisions—including but not limited to planners, architects, transportation engineers, and civil engineers—are in fact making choices about physical activity and population health outcomes. Conversely, if physical activity patterns are in part defined by land use and transportation decisions, then professionals who promote physical activity—including but not limited to physicians, public health officials, and recreation and leisure science staff—need to understand the science and professional practice that governs these decisions. For health professionals, land use and transport decisions cannot be taken as simple givens. Rather, health professionals must view them as potential tools in their solutions box for combating threats to population health.

To produce the next generation of professional leaders capable of thinking effortlessly across disciplines, asking and answering the right questions (Schwartz and Carpenter 1999), and designing and creating environments that promote health and especially beneficial physical activity in our daily lives, we will need to train and educate students to think both deeply within disciplines and broadly across them. We will need researchers capable of designing and carrying out scientifically rigorous inquiries that cross the borders that today define the disciplinary

repositories in which we place the bits and pieces of our knowledge about the built environment and health. And finally, given the diverse populations throughout the world where our graduates will serve, there needs to be emphasis placed on understanding the changing demographics of US society and cultural diversity (Northridge 2004), gender and sexism (Krieger 2003), sexuality and heterosexism (Meyer 2001), the racial/ethnic structuring of inequalities (Nazroo 2003) and how racism harms health (Krieger 2003), immigration policies (Carrasquillo, et al. 2000; Lillie-Blanton and Hudman 2001), social and environmental equity (Northridge, et al. 2003), health and human rights (Gruskin and Tarantola 2001), and perhaps most fundamentally, how to ensure that affected constituencies possess “citizen power” to affect the outcome of a process (Arnstein 2000) and to aid in framing the research questions and devising the solutions (Corburn 2002).

Interdisciplinary Career Trajectories

If interdisciplinary programs at all levels of higher education are to endure, there must be a labor market for the services of people with the requisite training. We believe that these career paths already exist and that they will become stronger over the years as the connections between the built environment and population health become clearer. Given the preponderance of evidence to date, it is more reasonable to assume that the case for linkage will become stronger and more precise rather than the opposite.

As this occurs, the lines between related disciplines will blur and new ones emerge that create clear-cut job trajectories for students who focus on the intersection of the built environment and public health. The three locations for this work—government, business, and non-governmental organizations—are likely to abide, though their roles vis-à-vis one another are likely to shift.

It is likely that government will be a prime employer of interdisciplinary professionals as the impacts of the built environment upon population health become ever more refined and ever more apparent. Transportation agencies will need professionals who can cross interests in mobility and spatial access with understandings about health, safety, and physical activity. Public health departments will need individuals who can relate land use and physical activity to population health and well-being. Indeed, we have heard anecdotally that many agencies in these fields are already seeking these more broadly trained individuals. The agencies that we have learned are seeking such people range from those concerned with transportation, housing, planning, and parks to those concerned with health and mental hygiene. In most cases, early career professionals will quickly become program directors and managers for local initiatives that respond to and/or capitalize on the connections between planning, the built environment, and public health.

The business sector, too, will be a significant (though not likely as quantitatively large) employer of individuals with interdisciplinary training. It is difficult to see how large-scale projects that will alter the built environment will be able to move forward without taking into account the physical activity and population health implications of their creation. Hence, this training should be attractive to real estate developers, consulting firms, and real estate finance firms that will need to evaluate and/or certify the environmental soundness of large scale building ventures.

In a similar vein, jobs with not-for-profits that either advocate for programs or deliver services in these areas under contract to governmental bodies are also going to seek individuals who can work across physical activity, population health, and urban transportation planning.

Moreover, as more community development corporations and grassroots organizations seek to improve the living conditions of poor residents, these skills will also be in demand.

Finally, career paths within research institutions will also expand as the research enterprise expands to meet the challenges set forth in this paper and others in this commissioned series (Boarnet 2003; Bowser 2003; Brownson and Boehmer 2003; Handy 2003; Kirby 2003; Loukaitou-Sideras 2003; Meyer 2003). The academy will then be poised to meaningfully contribute to developing a more precise understanding of the transmission mechanisms between the uses of the built environment and physical activity, population health, and mental well-being.

CONCLUSION: TOWARD A NEW INTERDISCIPLINARY SYNTHESIS

Two conclusions are apparent from our scan of the academy. First, there is widespread recognition of the emerging importance of creating pedagogy and research that crosses older disciplinary and organizational boundaries to address problems of population health at the intersection of the built environment and physical activity. Moreover, these interests slide easily into even larger emerging concerns with the environmental impacts of the built environment upon population health in general. And second, to date this awareness has not been translated into institutional arrangements capable of sustaining long-term interdisciplinary teaching and research around this important intersection.

To the extent that this intersection is deemed important for meeting the needs of society, it follows that the academy needs to take steps either via internal transformation or via external funding through the carrots of grants and other incentives to begin to establish the necessary arrangements for faculty and students to work in new interdisciplinary areas in order to produce well-trained professionals to meet the challenge of this intersection and to provide the needed research to guide policy and planning in this all important area. The recognition of a need is only a necessary condition for change; sufficiency requires that the process of academic institutional change be considered as integral to meeting the need as the research and teaching that will flow from this change.

REFERENCES

- Ainsworth, B. E., and C. P. Youmans. Tools for Physical Activity Counseling in Medical Practice. In *Obesity Research*, Vol. 10, supplement 1, 2002, pp. 69S–75S.
- Arnstein, S. A Ladder of Citizen Participation. In *The City Reader* (R. T. LeGates and F. Stout, eds.), 2nd ed. Routledge, London, 2000, pp. 240–252.
- Berrigan, D., and R. P. Troiano. The Association Between Urban Form and Physical Activity in US Adults. In *American Journal of Preventive Medicine*, Vol. 23, No. 2 (supplement), 2002, pp. 74–79.
- Boarnet, M. G. The Built Environment and Physical Activity: Empirical Methods and Data Resources. Paper prepared for the Transportation Research Board and the Institute of Medicine Committee on Physical Activity, Health, Transportation, and Land Use, December 2003.

- Bowser, B P. Built Environments, Physical Activity, and Social Justice. Paper prepared for the Transportation Research Board and the Institute of Medicine Committee on Physical Activity, Health, Transportation, and Land Use, December 2003.
- Brown, D. R., R. R. Pate, M. Pratt, F. Wheeler, D. Buchner, B. Ainsworth, and C. Macera. Physical Activity and Public Health: Training Courses for Researchers and Practitioners. In *Public Health Reports*, Vol. 116, 2001, pp. 197–202.
- Brownson, R. C., and T. K. Boehmer. Patterns and Trends in Physical Activity, Occupation, Transportation, Land Use, and Sedentary Behaviors. Paper prepared for the Transportation Research Board and the Institute of Medicine Committee on Physical Activity, Health, Transportation, and Land Use, December 2003.
- Carrasquillo, O., A. I. Carrasquillo, and S. Shea. Health Insurance Coverage of Immigrants Living in the United States: Differences by Citizenship Status and Country of Origin. In *American Journal of Public Health*, Vol. 90, 2000, pp. 917–923.
- Corburn, J. Combining Community-Based Research and Local Knowledge to Confront Asthma and Subsistence-Fishing Hazards in Greenpoint/Williamsburg, Brooklyn, New York. In *Environmental Health Perspective*, Vol. 110, Supplement 2, 2002, pp. 241–248.
- Corburn, J. Environmental Justice, Local Knowledge, and Risk: The Discourse of a Community-Based Cumulative Exposure Assessment. In *Environmental Management*, Vol. 29, 2002, pp. 451–466.
- Corburn, J. Confronting the Challenges in Reconnecting Urban Planning and Public Health. In *American Journal of Public Health*, Vol. 94, 2004, pp. 541–546.
- Craig, C.L., R. C. Brownson, S. E. Cragg, and A. L. Dunn. Exploring the Effect of the Environment on Physical Activity: A Study Examining Walking to Work. In *American Journal of Preventive Medicine*, Vol. 23, No. 2 (supplement), 2002, pp. 36–43.
- Dannenberg, A. L., R. J. Jackson, H. Frumkin, R. A. Schieber, M. Pratt, C. Kochitzky, and H. H. Tilson. The Impact of Community Design and Land-Use Choices on Public Health: A Scientific Research Agenda. In *American Journal of Public Health*, Vol. 93, 2003, pp. 1500–1508.
- Diez-Roux, A.V. Residential Environments and Cardiovascular Risk. In *Journal of Urban Health*, Vol. 80, 2003, pp. 569–589.
- Engels, F. *The Condition of the Working Class in England*. Published, Germany, 1845. English translation published in 1886; republished with some revisions, and edited by Victor Kiernan. Penguin Books, New York, 1987.
- Evans, G.W. The Built Environment and Mental Health. In *Journal of Urban Health*, 2003, pp. 536–555.
- Ewing, R., and R. Cervero. Travel and the Built Environment: A Synthesis. In *Transportation Research Record: Journal of the Transportation Research Board*, No. 1780, TRB, National Research Council, 2001, pp. 87–114.
- Fee, E., and T. M. Brown. The Unfilled Promise of Public Health: Déjà Vu All Over Again. In *Health Affairs* (Millwood), Vol. 21, 2002, pp. 31–43.
- Fox, D. M., R. J. Jackson, and J. A. Barondess. Health and the Built Environment. In *Journal of Urban Health*, Vol. 80, 2003, pp. 534–535.
- Frank, L., and P. O. Engleke. How Land Use and Transportation Systems Impact Public Health: A Literature Review of the Relationship Between Physical Activity and Built Form. www.cdc.gov/nccdphp/dnpa/aces.htm. Accessed Jan. 31, 2004.

- Frumkin, H. Healthy Places: Exploring the Evidence. In *American Journal of Public Health*, Vol. 93, 2003, pp. 1451–1456.
- Greenberg, M., C. Lee, and C. Powers. Public Health and Brownfields: Reviving the Past to Protect the Future. In *American Journal of Public Health*, Vol. 88, 1998, pp. 1759–1760.
- Greenberg, M., H. Mayer, K. T. Miller, R. Hordon, and D. Knee. Reestablishing Public Health and Land Use Planning to Protect Public Water Supplies. In *American Journal of Public Health*, Vol. 93, 2003, pp. 1522–1526.
- Gruskin, S., and D. Tarantola. Health and Human Rights. In *The Oxford Textbook of Public Health* (R. Detels, J. McEwen, R. Beaglehole, and K. Tanaka, eds.). 4th ed. Oxford University Press, Inc., New York, 2001, pp. 311–335.
- Handy, S. Methodologies for Exploring the Link Between Urban Form and Travel Behavior. In *Transportation Research D*, Vol. 65, 1996.
- Handy, S. L., M. G. Boarnet, R. Ewing, and R. E. Killingsworth. How the Built Environment Affects Physical Activity: Views from Urban Planning. In *American Journal of Preventive Medicine*, Vol. 23, No. 2 (supplement), 2002, pp. 64–73.
- Handy, S. Critical Assessment of the Literature on the Relationships Among Transportation, Land Use, and Physical Activity. Paper prepared for the Transportation Research Board and the Institute of Medicine Committee on Physical Activity, Health, Transportation, and Land Use, December 2003.
- Jackson, R. J. The Impact of the Built Environment on Health: An Emerging Field. In *American Journal of Public Health*, Vol. 93, 2003, pp. 1382–1384.
- Kirby, S.D. Consumer Preferences, Marketing, and Social Marketing Approaches in Relation to Physical Activity Behavior and Travel and Location Choices. Paper prepared for the Transportation Research Board and the Institute of Medicine Committee on Physical Activity, Health, Transportation, and Land Use, December 2003.
- Kriebel, D., J. Tickner, P. Epstein, J. Lemons, R. Levins, E. L. Loechler, M. Quinn, R. Rudel, T. Schettler, and M. Stoto. The Precautionary Principle in Environmental Health. In *Environmental Health Perspectives*, Vol. 109, 2001, pp. 871–876.
- Krieger, J., and D. L. Higgins. Housing and Health: Time Again for Public Health Action. In *American Journal of Public Health*, Vol. 92, 2002, pp. 758–768.
- Krieger, N., and A. E. Birn. A Vision of Social Justice as the Foundation of Public Health: Commemorating 150 Years of the Spirit of 1848. In *American Journal of Public Health*, Vol. 88, 1998, pp. 1603–1606.
- Krieger, N., and S. Gruskin. Frameworks Matter: Ecosocial and Health and Human Rights Perspectives on Disparities in Women’s Health—The Case of Tuberculosis. In *Journal of American Medical Women’s Association*, Vol. 56, 2001, pp. 137–142.
- Krieger, N. Does Racism Harm Health? Did Child Abuse Exist Before 1962? On Explicit Questions, Critical Science, and Current Controversies: An Ecosocial Perspective. In *American Journal of Public Health*, Vol. 93, 2003, pp. 194–199.
- Krieger, N., J. T. Chen, P. D. Waterman, D. H. Rehkopf, and Subramanian. Race/Ethnicity, Gender, and Monitoring Socioeconomic Gradients in Health: A Comparison of Area-Based Socioeconomic Measures—The Public Health Disparities Geocoding Project. In *American Journal of Public Health*, Vol. 93, 2003, pp. 1655–1671.
- Krieger, N., M. E. Northridge, S. Gruskin, M. Quinn, D. Kriebel, G. Davey-Smith, M. Bassett, D. Rehkopf, K. Miller, and the HIA “Promise and Pitfalls” Conference Group. Assessing

- Health Impact Assessment: Multidisciplinary and International Perspectives. In *Journal of Epidemiology & Community Health*, Vol. 57, 2003, pp. 659–662.
- Krieger, N. Genders, Sexes, and Health: What Are the Connections—And Why Does It Matter? In *International Journal of Epidemiology*, Vol. 32, 2003, pp. 652–657.
- Lewis, B. A., B. H. Marcus, R. R. Pate, and A. L. Dunn. Psychosocial Mediators of Physical Activity Behavior Among Adults and Children. In *American Journal of Preventive Medicine*, Vol. 23, No. 2 (supplement), 2002, pp. 26–35.
- Librett, J. J., M. M. Yore, and T. L. Schmid. Local Ordinances That Promote Physical Activity: A Survey of Municipal Policies. In *American Journal of Public Health*, Vol. 93, 2003, pp. 1399–1403.
- Lillie-Blanton, M., and J. Hudman. Untangling the Web: Race/Ethnicity, Immigration, and the Nation's Health. In *American Journal of Public Health*, Vol. 91, 2001, pp. 1736–1738.
- Loukaitou-Sideras, A. Transportation, Land Use, and Physical Activity: Safety and Security Considerations. Paper prepared for the Transportation Research Board and the Institute of Medicine Committee on Physical Activity, Health, Transportation, and Land Use, December 2003.
- Meyer, I. H. Why Lesbian, Gay, Bisexual, and Transgender Public Health? In *American Journal of Public Health*, Vol. 91, 2001, pp. 856–859.
- Meyer, M. D. Institutional and Regulatory Factors Related to Non-Motorized Travel and Walkable Communities. Paper prepared for the Transportation Research Board and the Institute of Medicine Committee on Physical Activity, Health, Transportation, and Land Use, December 2003.
- Motl, R. W., R. K. Dishman, D. S. Ward, R. P. Saunders, M. Dowda, G. Felton, and R. R. Pate. Examining Social-Cognitive Determinants of Intention and Physical Activity Among Black and White Adolescent Girls Using Structural Equation Modeling. In *Health Psychology*, Vol. 21, 2002, pp. 459–467.
- National Environmental Policy Act, 42 USC 4321. 1970.
- National Research Council. *Cities Transformed: Demographic Change and its Implications in the Developing World*. National Academies Press, Washington, D.C., 2003.
- Nazroo, J. Y. The Structuring of Ethnic Inequalities in Health: Economic Position, Racial Discrimination, and Racism. In *American Journal of Public Health*, Vol. 93, 2003, pp. 277–284.
- Northridge, M. E., and E. Sclar. Housing and Health. In *American Journal of Public Health*, Vol. 92, 2002, pp. 701.
- Northridge, M.E., and E. Sclar. A Joint Urban Planning and Public Health Framework: Contributions to Health Impact Assessment. In *American Journal of Public Health*, Vol. 93, 2003, pp. 118–121.
- Northridge, M. E., G. N. Stover, J. E. Rosenthal, and D. Sherard. Environmental Equity and Health: Understanding Complexity and Moving Forward. In *American Journal of Public Health*, Vol. 93, 2003, pp. 209–214.
- Northridge, M. E., E. Sclar, and P. Biswas. Sorting Out the Connections Between the Built Environment and Health: A Conceptual Framework for Navigating Pathways and Planning Healthy Cities. In *Journal of Urban Health*, Vol. 80, 2003, pp. 556–590.
- Northridge, M. E. Building Coalitions for Tobacco Control and Prevention in the 21st Century. In *American Journal of Public Health*, Vol. 94, 2004, pp. 178–180.

- Rose G. Sick Individuals and Sick Populations. In *International Journal of Epidemiology*, Vol. 14, 1985, pp. 32–38.
- Sachs, J. Don't Know, Should Care. In *New York Times*, Op Ed, June 5, 2004.
- Savitch, H. V. How Suburban Sprawl Shapes Human Well-Being. In *Journal of Urban Health*, Vol. 80, 2003, pp. 5900–607.
- Schulz, A. J., and M. E. Northridge. Social Determinants of Health: Implications for Environmental Health Promotion. In *Health Education and Behavior*, (in press).
- Schwartz, S., and K. Carpenter. The Right Answer to the Wrong Question: Consequences of Type III Error for Public Health Research. In *American Journal of Public Health*, Vol. 89, 1999, pp. 1175–1180.
- Sciar, E. D. Homelessness and Housing Policy: A Game of Musical Chairs. In *American Journal of Public Health*, Vol. 80, 1990, pp. 1039–1040.
- Sciar, E., and M. E. Northridge. Property, Politics and Public Health. In *American Journal of Public Health*, Vol. 91, 2001, pp. 1013–1015.
- Sciar, E. D., and M. E. Northridge. Slums, Slum Dwellers, and Health. In *American Journal of Public Health*, Vol. 93, 2003, pp. 1381.
- Shepard P., and M. E. Northridge, S. Prakash, and G. N. Stover. Advancing Environmental Justice Through Community-Based Participatory Research. In *Environmental Health Perspectives*, Vol. 110, No. 2 (supplement), 2002, pp. 139–140.
- Sparling, P. B., N. Owen, E. V. Lambert, and W. L. Haskell. Promoting Physical Activity: The New Imperative for Public Health. In *Health Education Research*, Vol. 15, 2000, pp. 367–376.
- Srinivasan, S., L. R. O'Fallon, and A. Dearry. Creating Healthy Communities, Healthy Homes, Healthy People: Initiating a Research Agenda on the Built Environment and Public Health. In *American Journal of Public Health*, Vol. 93, 2003, pp. 1446–1450.
- United Nations Human Settlements Programme (UN-HABITAT). The Challenge of Slums: Global Report on Human Settlements 2003. Earthscan Publications, London, 2003.
- U.S. Department of Health and Human Services. Physical Activity and Health: A Report of the Surgeon General. Centers for Disease Control and Prevention, Atlanta, Ga., 1996.
- Wang, J., M. Weaver, K. D. DuBose, K. A. Kirtland, and B. E. Ainsworth. Participation in Physical Activity to Lower the Risk of Heart Disease or Stroke. *J S C Med Assoc.*, Vol. 98, 2002, pp. 313–315.

TABLE 1 Joint Programs in Urban Planning and Public Health

	BA/BS	MA/MS	PHD			Joint MPH?	Program Emphasis/Mission	Coursework	Notes
Alabama A&M University	Bachelor of Science in Urban Planning	Master of Urban and Regional Planning	No	saes.aam u.edu	cizeogu@ aamu.edu	No	"The program is designed to prepare students to become professional planning practitioners who formulate plans and policies to meet the social, economic, and physical needs of urban and rural communities. The objectives of the program are: to offer a core planning curriculum that provides a firm foundation for the generalist planner; to provide students the choice of four areas of concentration to strengthen and focus their generalist background; to expose students to current local, national and international planning issues and situations through applied research and the practical application of the principles and techniques of planning, and to prepare students to enter the planning profession as competent practitioners."		
Arizona State University		Master of Environmental Planning	No	http://www.asu.edu/caed/SPLA/program/mep/index.shtml	metp.spla@asu.edu	No	"The Master of Environmental Planning (MEP) is an interdisciplinary, professional degree designed to prepare students for leadership roles in planning in both the public and private sectors and from local to international areas of involvement. The MEP program offers students a unique opportunity to integrate urban and environmental aspects of planning in rapidly developing metropolitan areas in the demographic and climatic context of the southwest region of the United States. Individual practical experience in planning is provided through an optional internship program and applied research."		
Ball State University	Bachelor of Urban Planning and Development	Master of Urban and Regional Planning		www.bsu.edu/cap/planning/planning.html	bfrankel@bsu.edu				Web link not working on 7/30/03 - No information available
California Polytechnic State University, San Luis Obispo	Bachelor of Science in City and Regional Planning	Master of City and Regional Planning	No	http://planning.calpoly.edu/	wsiembie@calpoly.edu	Joint MCRP (Master of City and Regional Planning)/Master of Science Engineering specializing in transportation	Urban land planning (comprehensive physical planning and urban design) and environmental planning (natural systems and development impacts)	Pollution prevention and control; Environmental design methods; Evaluating social and behavioral factors for open space design	Printed out list of electives 7/30/03 - environmental planning emphasis courses sound promising
California State Polytechnic University, Pomona	Bachelor of Science in Urban and Regional Planning	Master of Urban and Regional Planning	No	www.csupomona.edu/~urp/	gurey@csupomona.edu	No - environmental specialization	Environmental Specialization focuses on waste management policy		

	BA/BS	MA/MS	PHD			Joint MPH?	Program Emphasis/Mission	Coursework	Notes
Clemson University		Master of City and Regional Planning	No	http://www.clemson.edu/caah/pla/planning/index.htm	CUPlanning-L@clemson.edu	Maybe - need to contact director for further info (J. Terrence Farris) - specialization in environmental planning is available	"The Master's of City and Regional Planning (MCRP) program taps the diverse resources of other planning-related departments in the University such as finance, civil engineering, industrial management, economics, political science, sociology, environmental and transportation engineering, architecture, and construction science and management."	Outdoor recreation resource management and planning	
Cleveland State University		Master of Urban Planning, Design and Development	Yes	urban.csuohio.edu	dennis@wolf.csuohio.edu	No joint degree, but strong environmental specialization	"The environmental specialization provides students with an understanding of basic and intermediary concepts, methods, and practice in environmental planning. Environmental planning entails integration of ecological and human health concerns into other areas of planning, most particularly in land use decisions, land development regulation, local ecological function (surface water, ground water, habitat, etc.) and ambient quality of life for humans."	PDD 550: Environment & Human Affairs looks at human issues and pathways to health issues	
Columbia University		Master of Science in Urban Planning	Yes	www.arch.columbia.edu/up	eds2@columbia.edu	Yes, but not listed on the web site	"The Urban Planning Program has a balanced emphasis on the physical, economic, and social sides of planning. Our curriculum is focused upon the challenges of large-scale urbanism and social justice. Large-scale urbanism requires planning for regions where multiple millions of people live, regions that increasingly characterize much of the United States and our planet. The Columbia program strives to combine that education with an appreciation of the importance of integrating social equity and sustainable environmental concerns into the practice of urban planning."		
Cornell University		Master of Regional Planning	Yes	http://www.dcrp.cornell.edu/	jff1@cornell.edu	No	"We study and learn about cities and regions - the way they function (or don't function) for the people who live and work in them. Since the world's population is rapidly urbanizing, we need citizens and planning professionals with a sophisticated understanding of how and why cities and regions develop as they do. "		
Eastern Michigan University	Bachelor of Science/Major in Urban and Regional Planning				geo_tyler@online.emich.edu				Information not available online

	BA/BS	MA/MS	PHD			Joint MPH?	Program Emphasis/Mission	Coursework	Notes
Eastern Washington University	Bachelor of Arts in Urban and Regional Planning	Master of Urban and Regional Planning	No	www.cbpa.ewu.edu/~planning	dwinchell@ewu.edu	No	"To provide communities and agencies with competent professionals in the field of urban and regional planning. To prepare professionals who can develop and administer planning policies for the economic vitality, resource efficiency and environmental quality of communities and regions. To fulfill the need for planning related research with particular emphasis given to research benefiting the region and state. To provide community services in the form of continuing education for public officials, practicing professionals, and citizens; technical assistance for area agencies and communities; information and technology exchange with local, state and federal authorities."		
Florida Atlantic University		Master of Urban and Regional Planning	No	http://www.fau.edu/divdept/caupa/durp/index.html	gale@fau.edu	No	"The Environmental Planning Certificate program addresses issues related to brownfield redevelopment, water quality and availability, and opportunities for improving the quality of life in the urban community."		Offers Environmental Planning certificate program
Florida State University		Master of Science in Planning	Yes	www.fsu.edu/~durp	durp@cos.s.fsu.edu	No	"Students who want to improve public transportation , seek other alternatives to single occupant autos, or improve the automobile-based transportation system in harmony with a more humane urban and regional environment will find sympathetic support in the MSP program. "		
Georgia Institute of Technology		Master of City Planning	Yes	http://www.coa.gatech.edu/crp/	cheryl.contant@arch.gatech.edu	No	"The Program curriculum gives students both a broad understanding of the urban and regional environment and a foundation of skills needed to plan for this environment. The Program strives for a careful balance between the theoretical, historical, and conceptual knowledge about urban and regional development on the one hand, and the acquisition of practical skills and methods of analysis on the other. "	CP6214 - Environmental Planning and Impact Assessment	
Harvard University		Master of Urban Planning	No	www.gsd.harvard.edu/depts/upddept	mhoward@gsd.harvard.edu		"The accredited curriculum is composed of course work and planning/design studios, which explore the physical attributes of the built environment in relation to economic, social, political, legal/institutional, and environmental forces."		Info not available
Hunter College, City University of New York		Master of Urban Planning	No	maxweber.hunter.cuny.edu/urban	wmilczara@hejira.hunter.cuny.edu	No - Transportation and Environment Concentration	"The program seeks to train professional planners, who are well-versed in planning theory, methods, and urban structure. Students develop a specialized knowledge of a policy planning area, and the skills and intellect to operate as a professional planner. "	URBP 732: Introduction to Transportation Planning; URBP 733: Transportation Planning Methods and Models; URBP 734: Environmental Planning; URBP 735: Law of Environmental Planning	

	BA/BS	MA/MS	PHD			Joint MPH?	Program Emphasis/Mission	Coursework	Notes
Iowa State University	Bachelor of Science in Community and Regional Planning	Master of Community and Regional Planning	No	www.public.iastate.edu/~design/crp/crp.html	rmahayni@iastate.edu	No - Rural and environmental planning concentration	"Planning is the profession that is dedicated to helping society manage change. Planners help to evaluate and seize opportunities and to understand and solve problems. Most planners work at the local level, but they are concerned with issues that affect the world-the preservation and enhancement of the quality of life in a community, the protection of the environment, the promotion of equitable economic opportunity and the management of growth and change of all kinds."		
Kansas State University		Master of Regional and Community Planning	No	http://aalto.arch.ksu.edu/jwkplan/departmen/about/about.htm	larcp@ksu.edu	No - Master of Arts Degree, Environmental Planning & Management: a distance learning degree and Environmental Design Degree in conjunction with the college of human ecology	"The Program in Small Towns and Rural Area Planning. Dedicated to the study and preservation of social and economic life in the non-metropolitan places of North America. We are located in the "Heartland of America," home of numerous country towns and small metropolitan areas and enjoy an ideal setting for the study of community planning."		
Massachusetts Institute of Technology		Master in City Planning	Yes	http://dusp.mit.edu/	sanyal@mit.edu	Not listed but possible. Also, EPG - Environmental Policy Group (specialization) sub-specialization in Science, Health, and Environmental Policy	"Although the field of urban planning has changed significantly over the last seventy-five years, at its core it still draws inspiration from a normative vision of the "good society." At MIT, this vision is nurtured by a commitment to a distinct notion of social progress which frames the teaching and research of the faculty and the mindset of the graduates."	11.369J Science, Politics and Environmental Policy (Fall) 1.812J Regulation of Chemicals, Radiation, and Biotechnology (Spring) [MIT listing]; 1.725J Chemicals in the Environment: Fate and Transport (Fall) [MIT listing]; 1.814J Industrial Ecology (Spring) [MIT listing]; EH278 Human Health and Global Environmental Change (Spring); STP203 Critical Perspectives on Policy Analysis+I31	
Michigan State University	Bachelor of Science in Urban and Regional Planning	Master in Urban and Regional Planning	No	www.ssc.msu.edu/~urp/	urp@msu.edu	No	"We are interested in problems and solutions in Michigan, the United States, and around the globe. Planning is a field where many academic disciplines contribute knowledge for a deeper understanding of the profession. Our curriculum gives students the tools to help make a difference for people in places where they live, work and spend time."		
Morgan State University		Master of City and Regional Planning	No	www.morgan.edu	ssen@morgan.edu	No	"Morgan's planning program strives to prepare a multicultural student body for professional planning experience in varied public and private settings. "		
New York University		Master of Urban Planning	Yes	www.nyu.edu/wagner/info/mup.html	mitchell.moss@wagner.nyu.edu	Not specified, but MPA (masters of Public Administration): Health Policy offered in same school	"The Master of Urban Planning (M.U.P.) Program prepares students for careers in the planning profession and related urban policy fields. The program's courses are designed to equip students with the knowledge and skills to work in government agencies, nonprofit organizations and private firms."	P11.2126/P11.2878 Risk Management in Environmental Health and Protection; P11.2610 Environmental Impact Assessment: Process and Procedures; P11.2612 Urban Infrastructure and Environmental Services; P11.2615 Environmental Management and Planning	
Ohio State University		Master of City and Regional Planning	Yes	www.crp.ohio-state.edu	pearlman.1@osu.edu	Not specified, but possible	"(Students) work closely with the faculty and explore a wide range of topics geared toward improving physical, spatial, and environmental quality of life for people. Planning is a unique and challenging profession. "		

	BA/BS	MA/MS	PHD			Joint MPH?	Program Emphasis/Mission	Coursework	Notes
Portland State University		Master of Urban and Regional Planning	Yes	www.upa.pdx.edu/usp	susp@pdx.edu	No	"The goal is to assist in the development of strong and equitable communities through an interrelated program of teaching, research and public service. Faculty interpret "the city" as including urban phenomena in all their global, national, regional, and local diversity."		
Pratt Institute		Master of Science in City and Regional Planning	No	www.pratt.edu/arch/gcpe	gradplan@pratt.edu	No - environmental specialization	"Pratt's planning and environmental programs emphasize a development process that responds to local needs and enlists local capacities. This process entails an understanding of ethnic, cultural, and demographic diversity, and shifting employment patterns created by the rapid and continuous transformation of the region and the economy."	Facility Planning and Programming; Planning for Sustainable Communities	
Rutgers, The State University of New Jersey		Master of City and Regional Planning	Yes	www.policy.rutgers.edu	rbrail@rci.rutgers.edu	No - environmental specialization and transportation specialization, and Urban and Community Development Specialization	"To become effective and ethical practitioners, students must develop a comprehensive understanding of cities and regions, and of the theory and practice of planning. They must also be able to use a variety of analytic methods in their practice. They must become sensitive to the ways in which planning affects individual and community values, and must be aware of their own roles in this process."	970:608 Human Rights, Health and Violence	
San Jose State University		Master of Urban Planning	No	www.sjsu.edu/depts/urbplan/up0d131.htm	urbplan@email.sjsu.edu	No	"Designed to prepare competent professionals who are well grounded in the theories, methods, and techniques of planning in local, regional, and state government for the purpose of improving the quality of urban regions. In addition, it provides the students with an opportunity for developing a significant background in a particular area of specialization."	URBP 222 Health and Urban Planning: Comprehensive health planning, including study of the broader aspects of public health, mental health, sanitation, and municipal engineering as related to overall planning, development, and administration of communities.	there is a certificate in Transportation Planning Management that deals with social and economic problems of the disadvantaged
State University of New York at Albany		Master of Regional Planning	No	www.albany.edu/gp/index.html	r.bromley@albany.edu	No	"The M.R.P. in Urban and Regional Planning is a 48-credit program designed to prepare students for professional planning careers with government agencies, consultancy firms, developers, and nonprofit groups."	Pln 549 Bicycle and Pedestrian Transportation Planning	Focus on regional planning
State University of New York at Buffalo		Master of Urban Planning	No	www.ap.buffalo.edu/planning	kafoster@ap.buffalo.edu	Not specified	"...planners and related professionals deal with some of the most profound and interesting issues of our time. As a planner you can have what people in other fields only dream of: an opportunity to combine your dedication to human betterment with a challenging and rewarding career. "		There is a joint degree "top-off" program with the UB Environment and society Institute in Environmental and physical planning, as well as an Environmental Epidemiology program, but not a joint MPH/MUP

	BA/BS	MA/MS	PHD			Joint MPH?	Program Emphasis/Mission	Coursework	Notes
Texas A & M University		Master of Urban Planning	Yes	taz.tamu.edu/LAUP	neuman@taz.tamu.edu	Not specified	"The Master of Urban Planning program at Texas A&M University unites the historically important skills and challenges of planning with the emerging areas of specialization where our faculty and university offer exceptional resources and strength."	PLAN 370 Introduction to Health Systems Planning: Introduction to planning in the health care system at both institutional and community levels. PLAN 631 Health Systems Planning and Policy: Specific health planning issues; distribution of manpower and facilities; financial resources, local-federal partnership, system's organization and governance. Cross-listed with BUSH 662 PLAN 633 Planning for Healthy Communities: An introduction to issues involved in planning healthy cities/communities; by exploring experiences initiated by the World Health Organization and subsequent international experiences, attention is given to the healthy cities/communities movement in the United States and the case studies of programs at local, state and national levels.	Heavy emphasis on health planning, but not necessarily health and planning
The University of Arizona		Master of Science in Planning	No	http://architecture.arizona.edu/planning/site/home.html	planning@u.arizona.edu	Not specified	Strong focus on concentrations, and emphasis on issues facing the southwest (water, sprawl, borderlands)	CPH 502 Environmental Monitoring & Analysis;RNR 512 Recreational Dimensions of Natural Resource Management; PLN 500: Ecosystemology	Environmental/Healthy Cities Planning concentration: It focuses on the interactions between human actions and the built environment and on the management of natural resources, and takes a comprehensive approach to the connections between community and individual health and the environment.
The University of North Carolina at Chapel Hill		Master of Regional Planning	Yes	www.unc.edu/depts/dcrpweb	dmoreau@email.unc.edu	Yes	"The Department of City and Regional Planning is one of the largest, oldest, and best known programs of graduate planning education and research in North America. It was founded in 1946 to demonstrate the practical application of social science methods to problems of government and the interdisciplinary union of social science, design and engineering. It was the first planning program in the nation with its principal university base in the social sciences rather than in landscape design or architecture. It has retained and strengthened its legacy while expanding the breadth and depth of its programs to include a full range of graduate planning study."	Public Investment Theory, Pedestrian and Bicycle Seminar: Students seeking careers in public health will learn how to shape the physical and social urban community in health-enhancing ways. This combination of skills will help forge broader and more powerful alliances that promote public health, safety and livability in American communities.	The intellectual, professional, and historical connections between public health and city planning have assumed new urgency in the twenty-first century as the challenges of chronic illness; urban livability and public safety have come to the fore. The built environment is increasingly seen as an important factor influencing physical activity, which in turn has multiple positive impacts on health promotion and disease prevention. The growth and redevelopment of urban areas impact social and economic well-being, public health, and safety. It is important to reconnect the public health and urban planning fields through professional training that will encourage greater connections in professional practice. The department of Health Behavior and Health Education (HBHE) in the School of Public Health and this department offer the dual-degree program in public health and planning. HBHE seeks to train future leaders in the planning, management and evaluation of health education programs. Planning students will learn about the public health impacts of planning and how public health professionals can be allies in achieving shared goals.
The University of Texas at Austin	No	Master of Science in Community and Regional Planning	Yes	http://wntcc.utexas.edu/~architecture/arc/academic/crp/main.html	rgfp@mail.utexas.edu	No	"The program provides comprehensive training for professional practice in the public and private sectors. Students learn to deal with increasingly complex urban and regional problems facing federal, state, and local governments. Rigorous and thorough analysis techniques are demanded for such challenges as metropolitan growth management, revitalizing central cities, improving transportation systems, balancing regional economic disparities, and alleviating air and water pollution. "	CRP 387C Planning for Open Space--People Places, Parks, and Biodiversity; CRP 384 Planning for Accessibility; CRP 384 Highways and Communities; CE391T Contemporary Transportation Issues	There is mention on the website of a project that dealt with access to health care facilities in Oaxaca, Mexico.

	BA/BS	MA/MS	PHD			Joint MPH?	Program Emphasis/Mission	Coursework	Notes
Tufts University	No	Master of Arts in Urban and Environmental Policy & Planning	No	http://ase.tufts.edu/uep/about_uep/index.htm	ann.urosevich@tufts.edu		Biology Department; Eliot-Pearson Department of Child Development; Department of Civil and Environmental Engineering in the School of Engineering "The programs prepare public spirited individuals for careers in government, nonprofit organizations, citizen advocacy groups, and the private sector. Our goal is to educate a new generation of leaders -- "practical visionaries" -- who will contribute to solving key public problems by making institutions more responsive to the social and economic needs of communities and by moving toward the sustainable management of environmental resources. "	UEP 283 ENVIRONMENTAL COMMUNICATION AND EDUCATION ; UEP 224 Environment and the Food Supply , UEP 293C Chemicals, Health, and the Environment	There is a certificate in Community Environmental Studies http://ase.tufts.edu/gradstudy/uep/index.htm#ces
University De Montréal	Baccalaureat es-sciences specialise en urbanisme	Maîtrise en urbanisme		www.urb.umontreal.ca (site is in French)	marie.odile.trepanier@umontreal.ca				Info not available
University of British Columbia		Master of Arts or Master of Science (Planning)	Yes	http://www.scarp.ubc.ca/	pnichol@interchange.ubc.ca	Not listed	"SCARP's mission is to advance the transition to sustainability through excellence in integrated policy and planning research, professional education and community service."		Lawrence Frank joined the faculty this summer - J. Armand Bombardier Chair in Sustainable Transportation Systems, jointly appointed in SCARP and SDRI
University of California at Berkeley		Master of City Planning	Yes	http://www.dcrp.ced.berkeley.edu/	fcollig@uclink.berkeley.edu	Yes ; Also a joint degree with Transportation Engineering	"To provide students with an understanding of the history and theory of cities and urban regions, and of the field of city and regional planning; To provide students with life-long analytical, research, and communication skills; To provide students with the specific knowledge and skills they will need to become successful practicing planners in a wide range of urban, metropolitan, and regional planning areas"		Transportation Policy and Planning concentration - The Transportation Concentration focuses on planning for urban transportation facilities and services as well as the interaction between transportation and built, natural and social environments; Environmental Planning and Policy - Students are encouraged to consider how negative environmental impacts can be mitigated through the development of alternative approaches to urban settlement patterns, urban design and infrastructure systems.
University of California, Irvine		Master of Urban and Regional Planning	Ph.D. program in Planning, Policy, and Design	http://www.seweb.uci.edu/urp/	bollens@uci.edu	No, but Community Health Planning Concentration and Urban Design and Behavior Concentration	"It is an environment that allows researchers to establish linkages between a great number of areas, including sustainability, affordable housing, international political institutions, organizational design, poverty, built form, and social justice, all under the framework of Social Ecology."	U222 Water Policy; U229 Communities and Health;U235 Mobile Sources of Air Pollution; U275 Public Health Analysis; U281 Community Attitudes and Opposition;SE206 Perceptions of Environmental and Health Risks;SE215 Epidemiology and Biostatistics;SE267 Human Stress and the Environment as Stressor;SE291 Program Evaluation; MGMT266 Economics of Health Care Services;U232 Diversity and Urban Environments;U236 Contemporary American Urban Design;U272 Survey Research Methods;U288 Environmental Psychology	Community Health Planning: This area focuses on the interface between planning and community and individual health. It examines the public welfare, psychological, and health implications of social and physical planning; and the techniques and goals of public health policymaking. Urban Design and Behavior: The School of Social Ecology has an international reputation for its expertise in environmental design-behavior research and teaching. The Urban Design and Behavior specialization investigates the interrelationships of people and their sociophysical environments at all scales, from micro- to macro with particular emphasis on urban design and community-scale issues. Topics included in this area include the environmental psychology of residential environments, public spaces, and office and industrial settings; social and cultural diversity and community landscape design; and the fundamentals of urban design practice and research.

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University of California, Los Angeles		Master of Arts in Urban Planning	Yes	www.spps.r.ucla.edu/dup/home_dup.htm	shoup@ucla.edu	No	"The Department is committed to a curriculum that builds on the cultural diversity of its student body and the larger community. Its graduate programs provide students with a comprehensive and theoretical understanding of the multiple forces that shape a community's well-being."		There may be a different degree offered by the architecture dept, but the website is difficult to navigate
University of Cincinnati	Bachelor of Urban Planning	Master of Community Planning	Yes	ucplanning.uc.edu	david.edelman@uc.edu	No: Specialization in Community Environmental Health Planning Policy available in undergraduate level	"Education at the School of Planning prepares students to enter the professional practice of planning at local, regional, state and federal levels of government and within the private sector with a land developer, law firm, economic development agency/corporation, or other business. Alumni are employed in such positions throughout the United States as well as internationally, and many graduates enter Ph.D. programs upon completion of the MCP degree."	In the Environmental Health Department; 745: Introduction Environment,750: Public Policy and Environmental Health,772: Energy and Environment 776 Introduction to Epidemiology,834: Hazardous Waste Management. In the Civil and Environmental Engineering Dept; 257: Civil and Environmental Engineering,543: Hydrology, 14: Solid Waste Management,627: Mathematical Principles of Environmental Systems,641,2,3: Environmental Engineering Seminar (considered as one elective),646: Biological and Microbiological Principles of Environmental Systems,647: Chemical Principles of Environmental Systems,653: Physical Principles of Environmental Systems,661: Pollution Prevention and Economics,666: Environmental Risk Analysis and Assessment,667: Environmental Impact Analysis	Electives for the Environmental Specialization are offered through other schools, such as Civil Engineering and Environmental Health
University of Colorado at Denver		Master of Urban and Regional Planning	Yes	http://thunder1.cudenver.edu/andP/home.html	tlark@carbon.cudenver.edu	No - but environmental specialization is available	"Planning's mission is to identify the root causes of urban and regional problems; to fashion strategies that deploy policies, plans, resources, and regulatory approaches to create urban and regional environments suited to human and ecological needs; and to develop methods for evaluating the human and environmental consequences of urban problems, programs, policies, and plans."	From environmental studies degree: ENVS 6210(3): Human Health and Environmental Pollution	
University of Florida		Master of Arts in Urban and Regional Planning	Yes	web.dcp.ufl.edu/urp	paul@geoplan.ufl.edu	Not designated, but possible	"Our curriculum combines a traditional focus on land use and the physical development of communities with a public policy orientation. Courses seek a balance between planning theory and the technical expertise necessary for an effective and creative practice. Our concern is finding efficient solutions to our problems, but always with a planner's responsibility for equity and fairness, and a special commitment to the disenfranchised poor and future generations."		The Florida Center for Health Promotion is located at UFL - promotes projects for healthy living (exercise, no smoking, sun protection)

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University of Hawaii at Manoa		Master of Urban and Regional Planning	Yes	www.durp.hawaii.edu	idurp@hawaii.edu	No	"Urban and regional planning is an academic discipline that fosters a multidisciplinary set of intellectual and practical tools to help us chart our future in an age of uncertainty. We strive to improve the quality of life for present and future generations, both locally and globally, through planning, public policy and social collaboration."		Website seems to be located in two places - not sure which page is the most current.
University of Illinois at Urbana-Champaign	Bachelor of Arts in Urban Planning	Master of Urban Planning	Yes	www.urban.uiuc.edu	silver@uiuc.edu	No	"As the primary degree for professional practitioners, the Master of Urban Planning educates planners to perform a wide range of roles in government agencies, community organizations, consulting firms, and development corporations. Planning integrates knowledge developed within many disciplines in the natural and social sciences in order to address problems and opportunities in the development of human settlements. "	UP346. Ecological Numeracy: Planning Analysis of Environmental Issues: Course develops skills of estimation, simple calculations, and modeling to understand and participate in the debate about a wide range of environmental issues. Mathematical level does not exceed introductory calculus, but careful analysis is stressed along with limits, indirect effects, efficiency, dynamics and lags, and equity.	Urban Global Indicators Project: The Objectives: Focusing on the selection of "extensive" indicators of housing, transport, and urban services, this project will contribute to local capacity building by accomplishing the following objectives: Use GIS databases for two cities to assess quality of life at the intra urban level through measuring accessibility of urban infrastructure; Understand the relationship between data at the intra urban and aggregated urban levels, in order to derive general principles of disaggregation relevant to measuring accessibility; Devise a web-based training module with the necessary data, tools and techniques for evaluating the accessibility of urban infrastructure and services.
University of Iowa		Master of Arts or Master of Science in Urban and Regional Planning	No	www.uiowa.edu/~urp	heather-macdonald@uiowa.edu	Yes (with both Health Management and Policy and Environmental Health)	"At the heart of the master's degree program in Urban and Regional Planning is an integrated core curriculum that gives first-year students a solid foundation in social problem and public policy analysis, and prepares them for careers beyond the traditional position of city planner. During the second semester, students begin to develop areas of concentration. These areas of concentration include economic development, environmental planning, housing and community development, and transportation. Students often combine two of these areas. Other specialty areas, such as health services planning, human services planning, or land use, may be tailored to the student's goals."	Students in this joint program pursue an M.S. degree within the College of Public Health, with an emphasis on occupational and environmental health. Graduates typically find employment with state health and human services departments or in health or environmental planning. An M.S. in Environmental Health requires 38 hours. The joint degree in planning and environmental health involves a total of 65 semester hours, which includes 35 hours of planning courses and 30 hours of environmental health. The program can be completed in 5 semesters. Occupational and environmental health core courses are as follows: Principles of Epidemiology; Introduction to Biostatistics; Environmental Health;Preceptorship;Environmental Toxicology;Occupational Health;Occupational and Environmental Health Seminar; One course in human pathology or pathophysiology	A transportation studies certification program is offered in cooperation with the departments of civil and environmental engineering, geography and economics.
University of Kansas		Master of Urban Planning	No	www.saudku.edu/ubpl	ubpl@kans.edu	No	"The M.U.P. program emphasizes policy planning and analysis within the context of urban or urbanizing environments. Policies affecting urban issues are formulated at all levels of government--federal, state, regional, and local--as well as in the private sector. The M.U.P. program is geared towards meeting the needs for public planning policy regarding urban issues in all these forums."		
University of Maryland at College Park		Master of Community Planning	Yes	www.arch.umd.edu/URSP/	achen@ursp.umd.edu	Not listed	"The aim of the program is to prepare planning practitioners who will be generalists with a specialization. The core curriculum emphasizes student understanding of the political, institutional and social context in which professional planners develop and implement programs. Areas of specialization include local and community economic development, housing, land use and environmental	URSP 607 Human Behavior and the Physical Environment; URSP 633 Community Facilities and Infrastructure Planning	

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University of Massachusetts-Amherst		Master of Regional Planning	Yes	www.umass.edu/larp	jfa@larp.umass.edu	No	"The goal of the Regional Planning Program is to stimulate creative and systematic approaches for addressing and resolving the physical, economic, and social problems of towns, cities, and larger regions. Faculty and students are committed to the attempt to anticipate and adequately prepare for the impact of growth and development on the environment and vice versa, and to resolve conflicts between development and the environment."		Students completing the Housing, Social and Community specialization are encouraged to take classes in the school of public health.
University of Memphis		Master of City and Regional Planning	No	planning.memphis.edu	gpearson@cc.memphis.edu	No	A general regional planning degree. Requirements include Land Use Planning, Site Planning, Finance, Quantitative Methods, and Planning Principles and Theory.		
University of Michigan		Master of Urban Planning	Yes - PH.D. Urban, Technological, and Environmental Planning	www.caup.umich.edu/	medewar@umich.edu	Yes - student initiated with the school of Health Behavior and Health Education	"Graduate education at Michigan emphasizes the development of students' abilities to analyze, evaluate, integrate and apply critical thinking in interdisciplinary planning processes. "	Transportation and Society: the course hosts local and national experts from a range of fields and professions on transportation policy issues and how they affect other aspects of life, including health, environment, education, economic development and more.	M.U.P./M.P.H. with interests in community-based approaches to public health in urban areas and the effects of a healthy environment in improving the quality of life in places—whether in American cities or rural areas or in developing countries.
University of Minnesota		Master of Urban and Regional Planning	No	http://www.hhh.umn.edu	thomas.r.fisher-1@tc.umn.edu	Joint degrees between Master of Sciences Health Sciences/Master of Public Policy or Master of Landscape Architecture/Master of Urban and Regional Planning	"Planning is the professional discipline that seeks to influence how neighborhoods, cities, and regions develop. Planners bring together knowledge and expertise from sociology, engineering, law, architecture, social work, biology, landscape architecture, urban design, and other disciplines to shape cities and regions. Planners use their skills to assist communities in responding to changing social, economic, environmental, and cultural conditions. "	Networks and Places: Transportation, Land Use, and Design.	Professor Kevin Krizek specializes in transportation planning focused on travel behavior based on residential location. He may be a good person to contact. He teaches the course "Networks and Places: Transportation, Land Use, and Design." His contact info: kkrizek@hhh.umn.edu

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University of Nebraska-Lincoln		Master of Community and Regional Planning	No - PhD offered in Geography, with a planning specialization	www.unl.edu/archcol/crp/index.html	rcantareo1@unl.edu	Joint degree between urban planning and civil engineering: MCRP(Master of City and Regional Planning)/MSCE (Master of Science in Civil Engineering)+G7	"The MCRP degree program offered emphasizes the understanding of the importance and interrelationships among human resources, natural resources, socio-cultural characteristics, economic activity, political and institutional roles, and characteristics of the natural and built environment. The program provides students with a sound foundation in planning theory, methods, process, and application - a background which enables graduates to formulate, initiate, and coordinate a broad range of planning and development actions."		Allied programs: interdisciplinary programs on three different topics are available. Each topic has many participating schools. For examples, "Environmental Studies:One Interdepartmental Area is "Environmental Studies." In addition to the Department of Community and Regional Planning, other academic departments at UNL participating in this Interdepartmental Area include Agricultural Economics; Agronomy; Anthropology; Architecture; Biological Sciences; Chemistry; Civil Engineering Economics; Entomology; Forestry, Fisheries, and Wildlife; Geography; Geology; Horticulture; Law (Master of Legal Studies Program); Leadership Education; Mathematics; Physics and Astronomy; Plant Pathology; Political Science; and Sociology."
University of New Mexico	MCRP	Master of Community and Regional Planning	No	www.unm.edu/~saap/crp	crp@unm.edu	No	"The mission of the Masters in Community and Regional Planning (MCRP) program is to plan and advocate for sustainable communities and ecosystems within the Southwest regional context through education, service and research. The Program's purpose is to provide future planners with the knowledge and skills necessary to support planning by diverse human communities. Students of the MCRP program learn to assist communities to create community-based plans and programs that sustain and enhance their culture, resource base, built environment and economic vitality. The program promotes participatory processes which respond to community identities and development needs. "		Affiliated with the Institute for Environmental Education : "The Institute for Environmental Education (IEE) engages in research aimed at raising the level of awareness, understanding, and knowledge of environmental design at all educational levels. It has a special focus on children, with projects such as Architecture & Children, that are intended to enhance youth appreciation of community planning and architecture. "
University of New Orleans		Master of Urban and Regional Planning, MS Urban Studies	PhD in Urban Studies	www.uno.edu/~cupa/	cupa@uno.edu	No	"The College of Urban and Public Affairs is a key element in the University of New Orleans' metropolitan mission of engagement with the community. The challenge of being an active urban and public affairs college in a major public university - in a large and diverse metropolitan region - requires that CUPA collaborate with a broad array of public and private partners. It also means staying in close contact with the many facets of the University itself since numerous faculty and students at UNO are engaged in teaching and research that relates to our region. "		

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University of Oklahoma		Master of Regional and City Planning	No	www.ou.edu/architecture/drcpl	rmarshment@uo.edu	No Not specified, but may be an option	"The mission of the Division of Regional and City Planning (RCPL) is to advance the art and practice of planning through educating students for lifelong professional practice and through expanding the knowledge on which practice is based. "		
University of Oregon	Policy only	Master of Community and Regional Planning	No	utopia.uoregon.edu/	mhibbard@uoregon.edu	No	"Entering CRP students should be prepared to become actively involved in the resolution of important social, economic, environmental, political, and cultural issues. A major program objective is to connect the theory and practice of planning in learning situations that allow students to acquire skills and experience while helping address planning and public policy issues relevant to the people and the natural resource base of the region. "	BI 571, Population Ecology; BI 572, Community Ecology ;	
University of Pennsylvania		Master of City Planning	Yes	http://www.upenn.edu/gsa/city_plan/index.htm	elbirch@pobox.upenn.edu	Graduate level studies link with school of engineering, but not Public Health	"Few professions offer the variety of activities, intellectual stimulation, creative outlets, and tangible rewards as city and regional planning. Focusing on the growth and development of neighborhoods, cities, regions, states, and nations, city and regional planners address urban opportunities and problems while shaping communities and environments in response to the needs of their citizens."		
University of Puerto Rico		Master in Planning			nvega@rrpac.upr.clu.edu				Info not available
University of Rhode Island	Yes	Master of Community Planning	No	www.uri.edu/cels/cpla	atash@uri.edu	No	Program broken into 4 areas of concentration: Environmental and Land Use Planning, Urban Design and Physical Planning, Housing and Community Development, and Social Policy Planning.		
University of Southern California	Yes	Master of Planning	Yes	www.usc.edu/dept/spdp/admissions/m_pl/html	dowell@usc.edu	No, but a master of health administration is offered by the same school	"Urban planning professionals are trained to define, analyze and solve urban problems at many different scales. In this work, they engage business, communities, citizen groups and elected officials to define, organize and better understand their physical, natural and social environments. Planners can aid them in making better decisions about problems related to land use, transportation, housing, economic development, environment, and appearance and design of communities. Helping public and private decision makers reach better decisions today, planners seek to build a better tomorrow. Planning is an excellent career choice for individuals wanting a role in shaping and implementing changes for our cities and communities."		Professor David Sloane teaches courses on health care planning, and leads a studio on the subject.
University of Tennessee, Knoxville	Not clear	Master of Science in Planning	Not clear	planning.cpa.utk.edu/	dap@utk.edu	No	"The structure of the program is based on the premise that the planner should possess a set of skills adaptable to varied tasks and employment settings. These settings include the traditional land-use/land-development emphasis but extend to such concerns as environmental planning, economic development, transportation, analytical methods, and regional planning and real estate development."		

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University of Texas at Arlington		Master of City and Regional Planning	No	http://www.uta.edu/supa/academic/cirp.htm	bright@uta.edu	No	"The program has been carefully designed to produce "new" professionals capable of innovation in dynamic environments. It teaches a strategic combination of analytical research methods, empirical research skills and the latest computer applications. It balances theory and practice and builds on a solid foundation of core planning courses. "		There is graduate (MA and MS) and undergraduate interdisciplinary program that the department participates in.
University of Virginia	Bachelor of City Planning	Master of Planning	No	www.virginia.edu/arch	abd8p@virginia.edu	No, but there is one available with the school of graduate engineering and applied science.	"The Department values environments where countrysides are productive and appropriately protected, where cities have vital centers and efficient means of movement, and where neighborhoods offer opportunities for all to live affordably and safely. The curriculum introduces students to the theories of planning, methods of analysis, effective means of communication, planning processes, and creative strategies for implementation. "	Healthy Communities:Explores the relationship between planning and human health drawing on interdisciplinary perspectives.	
University of Washington	Interdisciplinary Bachelor of Arts in Community and Environmental Planning	Master of Urban Planning	Yes	www.caup.washington.edu/html/urbdp/	fwest@u.washington.edu	There is an MS degree called Master in Strategic Planning for Critical Infrastructure (MSPCI) (see note)	"The Department envisions itself as a community of learners committed to developing a cutting-edge urban planning practice, research that advances the profession, and public service in the region, the nation, and the world. The key values that sustain us are sustainability, livability, economic and ecological vitality, and social justice and diversity. "		The MSPCI is a distance learning degree designed by the department of Urban Design and Planning in collaboration with the School of Public Health and Community Medicine. It is geared for government professionals concerned with Homeland Security. More info: http://depts.washington.edu/mspci/index.html
University of Wisconsin-Madison		Master of Science in Urban and Regional Planning	Yes	www.wisc.edu/urpl	smborn@facstaff.wisc.edu	No, but with other programs	"Three principal objectives guide the Master's program: 1. In a complex democratic society, policy and program formulation by governmental and other agencies benefit from a planning process which emphasizes the explicit identification of objectives, the design of possible courses of action to these ends and the systematic analysis and evaluation of the most likely possibilities.2. Students should be equipped with sufficient understanding of and training in the principal tools, methods, and techniques of planning to enable them to perform effectively as junior members of planning staffs from the start of their careers. 3. Students should learn the concepts, perspectives and practices that promise to be useful to them as they mature into positions of major influence and responsibility. "	718 Water Resources Management Practicum Planning Seminar; 719 Water Resources Management Practicum; 821 Resources Policy Issues: Regional and National; 939 Seminar: Social Planning	
University of Wisconsin-Milwaukee		Master of Urban Planning	No	http://www.uwm.edu/SARUP/planning/index.html	frankn@uwm.edu	No, but there is one available with Civil Engineering	"The Masters in Urban Planning at UWM seeks to equip students with the skills they will need wherever time and their personal careers may take them. For this reason, our program focuses on understanding urban dynamics and on developing the problem-solving skills needed to address urban problems and guide urban futures. Our program encourages students to recognize the long-range interdependencies between cities and their surrounding suburban and rural areas. "		Specialization in redevelopment: "Urban Revitalization, Advisors: Welford Sanders, Sammis White The cities of the US have been struggling for decades against the lure of the suburbs. There have been some victories, but much remains to be done. This emphasis option explores several aspects of urban redevelopment, starting with housing, the largest user of land (UP 762 Housing Markets and Public Policy). UP 692 explores real estate, and the discussion of how the urban market has responded to a variety of innovative initiatives. This option includes a mix of electives which touch on the social and economic aspects of our cities. "
University of Illinois at Chicago		Master of Urban Planning and Policy	Yes	www.uic.edu/cuppa/upp	chashoch@uic.edu	No	"Planning promises to comprehend and tame the uncertainties of modern urban life. To make good on such strong claims, planners must acquire plenty of knowledge and practical judgment. Our program equips students with the professional knowledge and skills they need to undertake such important and challenging work."	UPP 543. Planning for Community Based Health and Human Services. 4 Hours. Investigates the needs of special populations such as the elderly or mentally ill, the role of the planner in serving these groups and community based strategies to meet needs.	Urban Transportation Specialization

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Virginia Commonwealth University	Bachelor of Science in Urban Studies and Geography	Master of Urban and Regional Planning	Urban Policy Concentration: Ph.D. in Public Policy	http://www.has.vcu.edu/usp/	gjohnson@titan.vcu.edu	No	Not enough info on website		
Virginia Polytechnic Institute and State University	Bachelor of Science in Environmental Policy & Planning	Master of Urban and Regional Planning	Doctor of Philosophy in Environmental Design & Planning	http://www.uap.vt.edu	energy@vt.edu	No	"The program's mission is to develop in students: An understanding of the economic, social and environmental context of planning; An understanding of the history and tradition of the planning profession; An understanding of the use of basic planning theories, concepts and skills; Competence in an area of specialization; Competence in quantitative and qualitative analysis; Competence in the written and oral communication skills necessary to function as a planning professional."	CE 4114: Public Health Engineering; LAR 4984: Environmental Impact Assessment; UAP 4614: Health Policy; UAP 5684: Health Planning	There are two concentrations - one in Environmental planning and the other in Social Policy and Planning. Both have interesting, relevant courses, but they are not presented as a joint idea. However, if a student pursued both concentrations, they would have a good toolbox of information.
Wayne State University		Master of Urban Planning		http://www.science.wayne.edu/~gup	R.Boyle@wayne.edu				