

November 8, 2004

David W. Pershing
Senior Vice President for Academic Affairs
205 Park
Campus

RE: Proposal to Create a Graduate Certificate in Urban Planning

Dear Vice President Pershing:

At its meeting of October 25, 2004, the Graduate Council voted to approve a proposal to create a Graduate Certificate in Urban Planning within the College of Architecture and Planning.

The Graduate Certificate in Urban Planning is designed to complement the proposed Master of Urban Planning degree, also approved by the Graduate Council on October 25 and forwarded as a separate proposal.

A copy of the certificate proposal is attached for your approval and transmittal to the Academic Senate.

Sincerely,

David S. Chapman
Assoc. V.P. for Graduate Studies
Dean, The Graduate School

XC: Brenda Scheer, Dean, College of Architecture and Planning
Philip Emmi, College of Architecture and Planning

**A PROPOSAL TO
THE UNIVERSITY OF UTAH GRADUATE COUNCIL,
ACADEMIC SENATE AND BOARD OF TRUSTEES
TO ESTABLISH A**

GRADUATE CERTIFICATE OF URBAN PLANNING

October 14, 2004

Section I: The Request

The University of Utah requests approval to offer a Graduate Certificate of Urban Planning effective Spring 2005.

Section II: Educational Need and Objectives

Program Description and Purpose

In July 2003, the existing undergraduate urban planning program was officially transferred to the Graduate School of Architecture, which was renamed the College of Architecture + Planning. This change indicates the increased visibility and prominence that the University intends for this field.

The College of Architecture + Planning is advancing a parallel proposal for permission to offer a new graduate degree - the Masters of Urban Planning. That degree will be a professional degree similar to other professional degrees at the University.

The Profession: Urban planning is a rapidly growing professional field. More and more communities, governments, and corporations are recognizing that problems such as suburban sprawl, pollution, social inequities, and traffic congestion threaten our quality of life and economic development potential. The Intermountain West has a rapidly growing urban population. Civic organizations, local public agencies and philanthropic foundations throughout the region have spent considerable energy in raising awareness of urban

problems and their relationships to issues of the environment, local fiscal capacity, urban energy efficiency, public health, economic vitality, and quality of life.

Planning professionals regularly work together with citizens and other professionals to preserve critical lands, manage urban growth, promote water conservation and clean air, preserve historic resources, improve transportation systems, and diversify housing opportunities. These issues require urgent attention and receive the dedicated efforts of individuals from numerous walks of life. Urban planners help focus and coordinate these efforts. Many people are interested in developing better the capacity to do this. The proposed Certificate Program will ensure that such people gain basic competency in planning's societal function, its approach to problem formulation, its practical skills, and its substantive problem domains.

Audience: This proposal seeks to complement the proposed Master's Degree Program with a Certificate Program in Urban Planning. The Graduate Certificate of Urban Planning will serve three related audiences: (1) students in related fields wanting to better understand and work with urban planners, (2) students, professionals and community activists seeking further training to better engage planning problems, and (3) students not yet able to embrace the greater commitment required by the proposed Masters Degree Program in Urban Planning.

Accreditation: The Certificate Program is not designed to meet the accreditation standards of the Planning Accreditation Board. That task is reserved for the Master's Degree Program in Urban Planning. But the program does draw upon the basic purpose and structure of the accreditation standards.

Purpose: By extension, the Certificate Program seeks to fulfill, though in rudimentary fashion, the same purposes as an accredited Master's Degree Program. To wit, the Program seeks (1) to instruct students in the knowledge foundational to the field, namely the structure and function of urban settlements; the history and theory of the planning process; and the legal, political and administrative dimensions of plan making and policy implementation. It seeks (2) to instruct students in the specialized knowledge that pertains to particular sub-fields, issues and substantive domains within urban planning. Finally the Program seeks (3) to have

students gain competency in the analysis, design and communication skills used by professional practitioners to mediate between substance and process.

Requirements: Program requirements include: (1) one course from a selection of four providing foundational knowledge about the profession of urban planning; (2) three distributed electives providing a substantive consideration of planning's various sub-fields; and (3) one course from a selection of four providing training in practical skills specific to the profession of urban planning. In meeting these requirements, a student will take at least 15 credit hours of course work of which 12 must be from within the College of Architecture + Planning. All courses must be passed with a B - grade or better. An academic program completion plan for the Graduate Certificate may be found in Appendix A.

Justification for Number of Credits: The proposed 15 credit hour requirement represents a balance among three considerations: (1) our interest in making advanced studies in urban planning available to a broader audience, (2) our assessment of that audience's interest and capacity and (3) our interest in not overextending our present ability to offer graduate level instruction.

Admission Requirements: Students applying for the Graduate Certificate of Urban Planning must establish their status as either matriculated or non-matriculated students with the Office of the Registrar and apply for Program admission directly to the College of Architecture + Planning. Candidates for the Graduate Certificate must have a bachelor's degree from a fully accredited institution of higher learning, provide evidence of a 3.0 undergraduate grade point average, submit two letters of recommendation, present a statement of their professional intentions and secure the approval of the Urban Planning Student Affairs and Admissions Committee.

Student Advising: The proposed program will have a faculty advisor and a staff advisor. The faculty advisor will be the Planning Program Chair. The staff advisor will be the College's academic advisor. Materials describing program requirements, recommended curricula, course schedules, and faculty specializations will be maintained and be available to students in both digital and tangible forms. Students will be advised individually and in small groups prior to

admission. They will have ongoing access to advisors throughout their residency. Advisors will also stand ready to assist with guidance pertaining to the sub-fields of planning practice, the organization of planning practice, and the professional placement. Both regular and adjunct faculty will be apprised of the importance of this function and will be pressed into service to assist with guidance and professional placement.

Enrollment Limitation: We will limit successful applications to the Certificate Program each year. In doing so, we will take into account the quality of the applicant pool, the program's instructional capacity and the goal of maintaining an emphasis in class on the instruction of master's degree candidates. This limit should serve to screen unmotivated candidates and ensure quality participation in classes dominated by master's degree candidates.

Educational Need

Interest by planning practitioners, community activists, graduate students and our own undergraduates combine to create a need for the Certificate Program. Many planning practitioners in the region have been drawn from related fields of practice: the Certificate Program will serve practitioners who want a more formal exposure to planning instruction. We benefit substantially from a large and active civic community. Members of this community are often motivated by personal experience with urban change: several have indicated a desire for professional instruction in planning and would welcome a planning program with flexibility and a limited scope. We expect a small number of our own undergraduates to enter the Certificate Program as an intermediate activity prior to applying to professional programs in related fields. Finally, the Certificate Program will serve graduate students who seek to ally their disciplinary studies with competence in a practical field of professional endeavor. Otherwise, the need for a Certificate Program is ancillary to the need for a Master's Degree Program in Urban Planning as amply documented in a parallel proposal.

Labor Market Conditions: The U.S. Bureau of Labor Statistics maintains, in cooperation with the fifty states, a Labor Market Information System. It provides projections of annual job openings by detailed occupational category

including the category of "urban and regional planner." The Utah Labor Market Information System at <http://jobs.utah.gov/wi/pubs/Outlooks/State/> provides the following information projections for job openings in urban planning for the State of Utah:

| Table 1: Utah Occupation Projections, 2000-2010, US Bureau of Labor Statistics | | | | | | | | |
|--|------------|------|---------------------|--------------|-------|-------------|---------|-----------------|
| Occupation | Employment | | Annual Job Openings | | | Hourly Wage | | Training Level |
| | 2000 | 2010 | Growth | Replacements | Total | Entry | Average | |
| Urban & Regional Planners | 250 | 350 | 10 | 10 | 20 | \$14.80 | \$22.00 | Master's Degree |

Year 2000 employment is 250. Projected employment by 2010 is 350. The annual number of openings due to growth and replacements is 20. The required training level is a master's degree.

Moreover, Nevada, Idaho, Montana, and Wyoming do not have accredited degree programs in urban planning, creating a potential regional market in some of the fastest urbanizing areas of the country. Based on labor market projections formally available for three of these four states, we estimate there will be 15-20 job openings annually for urban and regional planners there as well.

Historically labor market conditions in surrounding states have been relevant to the urban planning program at the University of Utah. At its peak, the Master's Degree Program will graduate approximately 18 students per year. As a consequence, we expect there will be sufficient labor market demand in this and surrounding states to absorb both our Master's Degree candidates and the limited number of Graduate Certificate candidates we will graduate annually.

Student Demand: Student demand for the Graduate Certificate is expected to be regional in origin and consistent with the limited enrollments. Four sources of demand are expected to yield a sufficient number of applicants from which to choose selectively. One source of demand will be the Baccalaureate Program in Urban Planning which has been growing rapidly since moving to the College of Architecture + Planning. Graduate students majoring in related fields like Architecture, Engineering, Public Administration and Social Work will be another source of demand. Inquiries to date

suggest notable interest from within the region's large and active civic community. Finally, professional planners within the region freely acknowledge their limited professional formation and can be expected to add to Certificate Program demand. Demand from outside the metropolitan region is not likely to be strong.

Section III: Impact on Existing Programs

Similar Programs: Nationwide there are 89 accredited programs in planning at the graduate level and 16 at the undergraduate level. At present, there are no accredited urban planning programs in Utah, Wyoming, Montana, Idaho, or Nevada. Among public universities in surrounding states, there are graduate planning programs at Arizona State University, the University of Arizona, the University of Colorado, and the University of New Mexico.

Arizona State University School of Planning offers a 15-credit hours Certificate in Transportation Planning. The University of New Mexico is advancing a proposal to create a 12-credit hour Graduate Minor in Urban Planning. The College of Architecture and Planning, University of Colorado at Denver, offers two planning-related certificate programs, each at 18 credit hours and each open only to students with concurrent or prior master's degrees in related fields.

Utah State University offers two degrees that are related: (1) the Masters of Landscape Architecture, which has a strong site analysis component; and (2) the Masters of Science in Bioregional Planning, which focuses on large scale rural regions in an agricultural context. Neither offers a certificate program. No other program in the Utah System of Higher Education seeks to train urban and regional planners who work at the city and metropolitan scale and who are directly responsible for safeguarding the urban planning process.

Collaboration: While more true of the Master's Program, the existence of a Certificate Program will promote collaboration with related programs through the offering of cross-listed courses, the recognition of mutual interests among faculty in related programs and the exchange among students jointly or serially enrolled.

Community Involvement: An important benefit to the University of Utah of both the Graduate Certificate and the Master's in Urban Planning is the increased involvement in community affairs that each affords. One of the important missions of the University is increased involvement in community issues. While the proposed Master's in Urban Planning will create opportunities for our students and faculty to be more actively engaged in community-based projects, the proposed Certificate Program offers community activists an opportunity to be more involved with us in the study of urban planning practice.

Section IV: Courses

New Courses: Launching the Graduate Certificate of Urban Planning will entail the development of no new courses other than those already envisioned for the Master's Degree Program in Urban Planning. Nor does the Program presently envision the development of any distance learning courses.

Course Sequence: Certificate Program requirements will be in three parts: (1) Foundational Knowledge, (2) Practical Skills and (3) Substantive Area Electives. Options are displayed below:

Foundational Knowledge (choose one of the following four options):

URBPL 6100 City and Profession
URBPL 6200 Urbanization
URBPL 6240 Planning Theory and Ethics
URBPL 6260 Planning Law and Administration

Practical Skills (choose one from the following four):

URBPL 6010 Urban Research
URBPL 6020 Urban Analysis
URBPL 6030 Public Participation and Consensus Building
URBPL 6040 Physical Plan Analysis
COMM 7210 Environmental Conflict
GEOGR 6140 Methods in GIS
LAW 7010 Mediation/Advanced Negotiation

Substantive Area Electives (choose nine credit hours from the following):

ARCH 6230 Utah Architecture and Cities
ARCH 6235 American Suburban Development
ARCH 6262 Urban Design Theory
ARCH 6500 Preservation Theory and Practice
ARCH 6581 "Main Street" Revitalization (1.5 cr. hrs.)

| | |
|-------|---|
| ARCH | 6720 Project Finance and Economics (1.5 cr. hrs.) |
| ARCH | 6851 Societal Change, Architecture and Planning |
| FCS | 6120 Demographic Methods |
| GEOGR | 6160 Spatial Modeling in GIS |
| LAW | 7011 Mediation Clinic |
| POL S | 6240 Local Governmental Law |
| POL S | 6380 Public Budgeting and Finance |
| URBPL | 6010 Urban Research |
| URBPL | 6020 Urban and Regional Analysis |
| URBPL | 6030 Public Participation and Consensus Building |
| URBPL | 6220 Land Use Planning |
| URBPL | 6270 Metropolitan Regional Planning |
| URBPL | 6300 Housing and Community Development |
| URBPL | 6320 City Dollars |
| URBPL | 6330 Urban Growth Management |
| URBPL | 6340 Public/Private Interests in Land Development |
| URBPL | 6350 Public Lands and Environmental Policy |
| URBPL | 6360 Environmental Planning Law and Policy |
| URBPL | 6370 System Dynamics and Environmental Policy |
| URBPL | 6371 Complexity and Systems Thinking |
| URBPL | 6390 Community, Economy and Sustainability |
| URBPL | 6400 Urban Design Visualization (1.5 cr. hrs.) |
| URBPL | 6410 Site Planning |
| URBPL | 6420 Open Space Design |
| URBPL | 6600 Politics of Planning |
| URBPL | 6710 Transportation Planning |
| URBPL | 6720 Community Transport |

URBPL Course descriptions may be found in Appendix B.

Section V: Program Assessment

Objectives and Structure: The Certificate Program seeks to have students develop competency in elements of urban planning's foundational knowledge set, its specialized and substantive practice domains and its professional skill set. The proposed course sequence develops partial competency with respect to each objectives. The structure of course requirements creates the most opportunities for competency to be developed in specialized and substantive domains. This is where we expect most of the student demand to be, where we can engage students in topics that best match the range of their interests, and where we can do the most good for them and the issues they are likely to encounter upon graduation.

Summative Assessment: The Certificate Program will be offered in conjunction with the Master's Degree Program in Urban Planning. The latter will be subject to an accreditation process that will benefit the former.

In addition, the faculty and the dean will monitor the reactions of students, alumni and employers to program design and product. We will assess annually proposed revisions in the curriculum and in specific course requirements and teaching processes. Every five years, the accreditation process will provide substantial external review and feedback to further improve the quality of both programs.

Formative Assessment: As student progress through program requirements, they will be assessed by their instructors for their performance abilities, their substantive knowledge and their capacity for theoretical and critical reflection.

Section VI: Faculty

There are four tenured or tenure track faculty and one research faculty who comprise the full-time urban planning faculty. Biographical sketches may be found in Appendix C. Several architecture faculty and a cadre of experienced professional planners serving as adjunct faculty will complement core planning faculty. We have structured programs so as not to require additional full time faculty in the first five years of the program.

The following faculty will be associated with part one of the Certificate Program dealing with foundational knowledge:

Peter Atherton, Keith Bartholomew, and Philip Emmi.

The following regular and adjunct faculty will be associated with part two of the Certificate Program dealing with practical skills:

Ralph Becker, Tom Cova (Geogr), Pam Perlich, Tarla Peterson (Comm), Maged Senbel and Michele Straube (Law).

The following regular and adjunct faculty not previously mentioned will be associated with part three of the Certificate Program dealing with substantive area instruction:

Wayne Cotrell (Civil), Peter Goss, James Mills, Tony Serrato, Ken Smith (Fcs), Alice Steiner, Sumner Swaner, and Robert Young.

Section VII: Coordinator

Prof. Philip Emmi, Urban Planning Program Director, will be the Certificate Program Coordinator. His biographical sketch may be found in Appendix C.

Section VIII: Advisory Committee

The Urban Planning Student Affairs and Admissions Committee will serve as the Program's Advisory Committee. Its members, in addition to Prof. Emmi, include Professors, Keith Bartholomew, Martha Bradley, Tony Serrato and, as student representative, Nick Smith. The Program will not organize an external advisory committee apart from the College's Advisory Board.

Section IX: Budget

Apart from the most incidental expenditures, any expenses incurred in conjunction with Program delivery will be incurred in the normal course of offering the proposed Master's Degree in Urban Planning. The Certificate Program will not maintain a separate budget apart from the overall Urban Planning Program budget. Nor will there be any need for or value in having a separate accounting of Program expenses as it neither is driven by pecuniary objectives nor competes for scarce resources.

Appendix A:
An Academic Program Completion Plan
for the Graduate Certificate of Urban Planning

Student's Name: _____ NID _____

Student's Phone: _____ email _____

| Course Name and Number | Cr. Hrs. | Grade | Term Taken? |
|---|----------|-------|-------------|
| • Foundational Knowledge (choose one) | 3 | | |
| URBPL 6100 City and Profession | 3 | | |
| URBPL 6200 Urbanization | 3 | | |
| URBPL 6240 Planning Theory and Ethics | 3 | | |
| URBPL 6260 Planning Law and Administration | 3 | | |
| • Practical Skills (choose one) | 3 | | |
| URBPL 6010 Urban Research | 3 | | |
| URBPL 6020 Urban Analysis | 3 | | |
| URBPL 6030 Public Participation and Consensus Building | 3 | | |
| URBPL 6040 Physical Plan Analysis | 3 | | |
| COMM 7210 Environmental Conflict | 3 | | |
| GEOGR 6140 Methods in GIS | 3 | | |
| LAW 7010 Mediation/Advanced Negotiation | 3 | | |
| • Substantive Area (choose 3 from the list provided) | 9 | | |
| | 3 | | |
| | 3 | | |
| | 3 | | |

Student Signature and Date: _____

Advisor's Signature and Date: _____

Appendix B: Urban Planning Graduate Courses

6010 Urban Research (3)

A hands-on course in quantitative skills used for urban analysis. Data sources, dataset development, descriptive statistics, correlation, trend analysis, modeling, and styles for graphical and written presentation. Planning applications of demographic and economic analysis including population projection, economic base analysis, and measures of characteristics and distribution.

6020 Urban and Regional Analysis (3)

The economic, demographic, and spatial interaction models used to analyze and develop alternative urban and regional plans including cohort-survival, input-output, shift-share, and gravity models. Model concepts, mathematics, design, logic, and limitations. Small-scale spreadsheet models are applied to analyze problems, interpret output and present results.

6030 Public Participation and Consensus Building (3)

Case studies of collaborative and consensus building practices in the planning process; effective work-group behavior, nominal group processes, interpersonal and group dynamics; participatory practices for democratic involvement; the complexity of issues, the diversity of stakeholder interests, group identify and inter-group conflicts; conflict mediation in plan/program design and implementation; adaptive approaches to adjusting decisions over time.

6040 Physical Plan Analysis (3)

Analysis of the components (land use, transportation, natural systems, morphology, boundaries, demography, and typologies) of the physical city using computer applications

6100 City and Profession (3)

The history and culture of the industrial and post-industrial city. The history and culture of the urban planning profession. The relationship between the two.

6200 Urbanization (3)

Economic and urbanization processes. The form and structure of urban areas. Settlement patterns, migration, mobility, and suburbanization. Metropolitan regionalism, interregional competition, world urban hierarchies, and the city in a global economy.

6220 Land Use Planning (3)

Land-use concepts, activities, problems, and techniques for land-use planning.

6240 Planning Theory and Ethics (3)

Rationality and alternative approaches to the planning process; the scope of theory and ethics in planning; the prospects for collectively rational decision making: assorted cases and critiques; post-modern perspectives on coping with values, power, conflict, and ethical criticism.

6260 Planning Law and Administration (3)

Plan implementation including legal authority for planning, zoning, subdivision regulation, urban redevelopment; methodology and application; administrative procedures; place of planning in structure of governments; capital improvement programs.

6270 Metropolitan Regional Planning (3)

Theories of metropolitan regional development; their spatial organization; implications for land use, transportation and air quality; public policy context and options.

6280 Graduate Workshop (4) Prerequisite: 2nd year standing in graduate program.

Using actual clients and real-world locations, students develop a comprehensive plan and publish a final report.

6300 Housing and Community Development (3)

Revitalization of central cities and neighborhoods; programs and techniques for community environmental, social, and economic development; policies regulating financing, production, consumption, and preservation or market and low-income housing.

6320 City Dollars (3)

Economic, financial, and fiscal aspects of urbanization.

6330 Urban Growth Management (3)

Attitudes, issues, impact, and management alternatives explored through case studies and analytical exercises. Federal and state policies, and evaluation of local growth guidance systems.

6340 Public/Private Interests in Land Development (3)

Planning perspective on the competition between public and private interest in land use and development.

6350 Public Lands and Environmental Policy (3)

Meets with GEOGR 5350 and URBPL 5350. Graduate students should take URBPL 6350 and will be held to higher standards and/or more work. A review of environmental impact assessment, focusing on the policies, requirements, methods, and examples from the National Environmental Policy Act, with a review of state and local approaches to environmental impact assessment.

6360 Environmental Planning Law and Policy (3)

Meets with URBPL 5360. Graduate students should take URBPL

6360 and will be held to higher standards and/or more work. A review of federal, state, and local environmental laws, policies and procedures as they affect planning including air, water, and hazardous waste, impact assessment, public lands, common law, and aesthetic regulation.

6370 System Dynamics and Environmental Policy (3) Cross listed as CVEEN 6660, GEO 6340.

Environmental policy design requires an understanding of human interactions with environmental systems. It requires an accounting of the complexities of behavior, context and policy. These complexities often produce indirect and unanticipated consequences. They yield unexpected patterns and counter-intuitive results. Students from many academic fields learn user-friendly software (STELLA) to do environmental policy simulation without proficiency in advanced mathematics. Students use computer simulations to sort out environmental complexities; transform group perceptions into simulation models; apply principles of environmental management; test policy effects and define possible pathways for future policy change.

6371 Complexity and Systems Thinking (3) Cross listed as CVEEN 6661, GEO 6341.

Using actual clients and a systems thinking approach, multi-disciplinary student teams resolve real world problems in environmental complexity and sustainability. Student teams define system structures, feedback loops, counter-intuitive relationships and the unintended consequences of policy decisions. Students having completed 'System Dynamics and Environmental Policy' get to apply their experience in systems modeling in support of team efforts in full-scale, practical problem solving. Possible topics include: urban growth, drinking water, energy resources, air/water quality and environmental justice.

6390 Community, Economy, and Sustainability (3)

Policies for ecologically sustainable economies and actively integrated communities.

6400 Urban Design Visualization (1.5) Cross listed as ARCH 6125.

Multiple visualization techniques and the communication of planning concepts and design alternatives.

6410 Site Planning (3)

Meets with ARCH 6111. Review and analysis of development site design, plat map preparation, subdivision review and impact analysis.

6420 Open Space Design (3) Cross listed as ARCH 6831.

A framework for preserving and promoting cultural, ecological, developmental, agricultural and recreational assets through the design of open space plans.

6600 Politics of Planning (3)

Diverse views of urban land use, neighborhood development, local governments and citizen participation. Key actors and participants in the planning process. Managing the political aspects of urban change.

6950 Independent Study (2 to 4)

Graduate directed reading or individual/group projects as approved through program procedures.

6954 Professional Planning Internship (4)

An internship of at least 144 hours per term with either a private planning consultancy or a public planning agency. Each internship shall be coordinated with an agency- or consultancy-based mentor through an urban planning faculty member and shall culminate in a written report on the internship product/process and an oral presentation on the internship experience.

6960 Special Topics (2 to 4)

This course number is used to accommodate one-time courses, occasional courses, and experimental courses. Students may take more than one Special Topic course for credit.

6970 Masters Thesis Research (6)

Each thesis in Urban Planning shall be organized under the direction of a Master's Supervisory Committee with membership conforming to Graduate School Guidelines and presented in accordance with Graduate School Thesis Regulations.

6971 Professional Project (4)

Each professional project shall be organized under the direction of a Project Supervisory Committee with membership conforming to Urban Planning Guidelines and presented in accordance with these same guidelines.

6985 Faculty Consultation (3)

Repeatable. Continued consultation for Master's Thesis Project Preparation.

Appendix C: Graduate Planning Faculty

Brenda Case Scheer, Professor, Dean

Brenda Case Scheer, AIA, AICP, is the dean of the College of Architecture + Planning at the University of Utah. She was previously a professor at the University of Cincinnati, where she taught for twelve years. Her research specializations are the formal development of cities and urban design policy. She has published many articles and book chapters on design review, architecture, housing, and suburban form. She has co-authored three books: Suburban Form: an International Perspective; Design Review: Challenging Urban Aesthetic Control; and The Culture of Aesthetic Poverty. She is the winner of the prestigious Chicago Institute of Architecture and Urbanism Prize, which is awarded for writings on urban design. Dean Scheer has a long record of professional practice, including as a principal of Scheer & Scheer, Inc., where her projects include master planning, urban design and design guidelines as well as several award-winning architectural projects. She has also been involved in sustainable development projects in Thailand and Crete. She serves on the Steering Committee for Envision Utah, a public/private partnership for quality growth, is on the editorial board of the Journal of the American Planning Association, chairs the board of Artspace, Inc., and serves on the boards of ASSIST, the Utah State University Department of Landscape Architecture, and the APA Urban Planning and Design Standards Board (national). Before entering her academic career, she was director of urban design at the City of Boston, and vice president of a real estate development company in Houston. She holds masters and bachelors degrees in architecture from Rice University and she was a Loeb Fellow at the Harvard Graduate School of Design.

Philip Emmi, Professor, Program Director

For the last 20 years, Professor Philip Emmi has directed the undergraduate program in Urban Planning at the University of Utah. Previous to that he served four years as assistant professor at the University of Southern California's School of City and Regional Planning. Dr. Emmi's work in 1997 with the Utah Governor's Office of Planning and Budget prompted a deepening interest in the interaction between urban land use and urban transportation.

He is currently engaged as co-principal investigator on a major National Science Foundation grant with a substantial urban systems modeling element that simulates the dynamic interaction between urban land development and urban road construction. He also participates in a phase of the NSF research that brings research results to community leaders through a series of collaborative workshops on urban growth and urban atmospheric emissions. He serves as chair of an intercollegiate committee that administers an interdisciplinary certificate program in the Adaptive Management of Environmental Systems. In 1984, he was awarded the Juan Casalduero Traveling Fellowship to Spain. In 1986 he was awarded a Fulbright Scholar Postdoctoral Research Award for research in Barcelona. Between 1987 and 1995, he was awarded a series of seven summer research fellowships at the Swedish National Institute for Building Research where he developed mathematical models to aid in planning for urban housing. In 1988, he brought to the University of Utah its first major grant in geographic information systems applications - a seismic risk and policy assessment for the local region. These efforts have led to the publication of 8 book chapters, 34 articles in 16 different academic journals with academic presentations in 21 different states and 10 foreign countries. Dr. Emmi holds a Ph.D. in City and Regional Planning and a Masters in Regional Planning from University of North Carolina at Chapel Hill as well as a B.A. in Economics (magna cum laude) from Harvard University.

Craig Forster, Associate Professor - Research

Originally trained as a hydrogeologist, Dr. Forster spent almost three decades studying and modeling groundwater flow, petroleum migration/production, carbon dioxide sequestration, solute transport and heat transfer in geologic systems. He has co-authored more than 30 peer-reviewed papers in this arena. Dr. Forster now works to bridge gaps between environmental science and public policy in urban ecosystems and water sustainability. Dr. Forster contributes to, and leads, interdisciplinary teams that build system dynamics models to map and explore the complexities, linkages and feedbacks found at the interface between social institutions and the natural environment. Recent and ongoing projects include: (1) assessing water supply and demand futures under alternate climate scenarios, (2) studying the impact of population growth on quality of life at the U.S.-Mexico border, (3) investigating airshed

processes that contribute to urban CO₂ emissions, and (4) evaluating alternatives for CO₂ sequestration in the Southwest U.S. Dr. Forster facilitates communication within large interdisciplinary research teams that include social scientists, economists, natural scientists, urban planners and engineers. He actively contributes to the community engagement efforts that draw stakeholders and decision-makers into mediated modeling and community-based research. These efforts include facilitating University of Utah student service-learning projects in Urban Planning and Communication within an expanding network of community partners.

Keith Bartholomew, Assistant Professor

Keith Bartholomew, Assistant Professor of Urban Planning for the College of Architecture and Planning at University of Utah, is one of the nation's foremost authorities on alternative transportation and land use strategies. He is an environmental attorney with special emphases in land use and transportation planning, and community development and design. Before joining the faculty, Bartholomew was the Associate Director of the Wallace Stegner Center for Land, Resources, and the Environment at the University of Utah College of Law. He was also staff attorney for 1000 Friends of Oregon, a land use advocacy and research non-profit organization in Portland. While at 1000 Friends, professor Bartholomew directed "Making the Land Use, Transportation, Air Quality Connection" (LUTRAQ), an applied research project assessing the use of integrated land use/transportation planning as a tool to reduce automobile use and the need for new highway facilities. His publications include "The Evolution of Non-Governmental Land Use Planning Organizations," Journal of the American Planning Association, Fall 1999 and "Making the Land Use, Transportation, Air Quality Connection," American Planning Association PAS Memo, May 1993. His honors include the American Planning Association 1996 Current Topic Award, Environmental Protection Agency 1996 "Way to Go" Award, and 1994 German Marshall Fund Environmental Fellowship. Bartholomew holds degrees in music from Northern Illinois University and law from the University of Oregon. He is a board member of the Utah APA and the Utah Transit Authority.

Maged Senbel, Assistant Professor

Maged Senbel is an Assistant Professor of Urban Planning for

the College of Architecture and Planning at University of Utah. Previous to that he taught Sustainability Planning and Landscape Architecture at the School of Community and Regional Planning at the University of British Columbia. Maged has a history of professional experience overseeing design development and working drawings for various architectural and planning projects in British Columbia.

His research specializations include methods in leadership and the implementation of sustainable planning as well as integrated assessment ecological footprint analysis. He directs the Westside Studio, a cooperative project of the University Neighborhood Partners, the College of Architecture +Planning, Neighborhood Housing Services, and the College of Business. Prof. Senbel's doctoral research included an in depth analysis of the work of the director of Smart Growth British Columbia and a study of the collaborative design processes between Smart Growth BC and partner communities in BC's Lower Mainland. He has also conducted research on mixed use planning including home employment and flexible suburban zoning. Having worked in, and researched, sustainability planning in Vancouver, BC, he has expertise in the planning of one of the most compact, complete, and livable cities in North America. Prof. Senbel was the recipient of a number of top tier national scholarships in Canada and holds Ph.D. in Planning (fall 2004) from the University of British Columbia where he also received a Masters of Science in Planning. He also holds a Masters and Bachelors degree in Architecture from McGill University and the University of Oregon respectively.

Adjunct Faculty in the Graduate Program

Ralph E. Becker, FAICP, J.D., and M.S. geography (certificate in planning), University of Utah; B.A. American civilization, University of Pennsylvania. *adjunct professor*. Professor Becker is a respected professional planner and attorney, and former planning director of the State of Utah. He is a member of the Utah legislature.

Pamela Perlich, Ph.D. economics, University of Utah; B.S. economics, University of Tulsa, *adjunct professor*. Dr. Perlich also holds a senior research appointment in the Bureau of Economic and Business Research at the University of Utah. Her research is in demographics, economic systems and modeling of change.

Sumner Swaner, ASLA, AICP, bachelor of Landscape Architecture, Utah State University. *adjunct associate professor*. Professor Swaner is an international authority in open space planning and the founder of the Green Space Institute and the Swaner Nature Preserve. He has been in planning practice for many years.

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