

George Washington University

College of Professional Studies

Sustainable Urban Planning Program

Master of Professional Studies in Sustainable Urban Planning

Self-Study Report
for the
Planning Accreditation Board

August, 2016

TABLE OF CONTENTS – PARTS I TO III

PART I – SIGNATURES AND CONTACT INFORMATION	PAGE 3
PART II – PRECONDITIONS FOR ACCREDITATION AND BACKGROUND INFORMATION	PAGE 5
PART III – ACCREDITATION STANDARDS AND CRITERIA	PAGE 24

ABBREVIATIONS

The following abbreviations are used throughout this report:

- CPS – College of Professional Studies
- GW – George Washington University
- LDC – Least Developed Country
- PAB – Planning Accreditation Board
- SSR – Self-study Report
- SUP – Sustainable Urban Planning Program

PART I – SIGNATURES AND CONTACT INFORMATION

These signatures attest to the validity of the application and to the institution’s support for the accreditation of the planning Program.

1. PLANNING PROGRAM ADMINISTRATOR:

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Date:

Signature:

2. PERSON PREPARING APPLICATION (if different from above):

Name:

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Mailing Address:

Date:

Signature:

3. DEAN OR OTHER HIGHER ADMINISTRATOR:

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Date:

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4. INSTITUTION’S CHIEF ACADEMIC OFFICER:

Name: Forrest Maltzman

Phone: 202.994.6510

Title: Provost, George Washington University

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Date:

Signature:

5. INSTITUTION'S CHIEF EXECUTIVE OFFICER:

Name: Steven Knapp

Title: President, George Washington University

Mailing Address: 2121 I Street, NW, Suite 801
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Signature:

PLANNING STUDENT ORGANIZATION

Organization Name: Sustainable Urban Planning Student Organization

Phone: N/a

Student Name: Calvin Clessas, VP

Email: cclessas@gmail.com

LOCAL APA CHAPTER REPRESENTATIVE

Chapter Name: National Capital Area Chapter (NCAC) of the American Planning Association

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Phone: 630.248.8085

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PART II – PRECONDITIONS TO ACCREDITATION AND BACKGROUND INFORMATION

1. PRECONDITIONS

A. Program Graduates

Programs shall have granted the degree for which accreditation is sought to at least 25 students.

The Sustainable Urban Planning at GW has conferred 25 master's degrees. A detailed listing of these graduates can be found in Appendix IVC 2-A and Appendix IVC 2-B.

B. Accreditation Status of the Institution

The Program's parent institution shall be accredited by an institutional accrediting body recognized by the Council for Higher Education Accreditation (CHEA) or by its successor organization.

The Sustainable Urban Planning Program is part of GW, which is an R1 research university that is fully accredited by the Middle States Commission on Higher Education (<https://www.msche.org>).

C. Program and Degree Titles

Formal titles of programs and degrees shall contain the word "planning."

The degree for which accreditation is sought is a Master's of Professional Studies (MPS) in Sustainable Urban Planning.

D. Length of Program

Undergraduate degree programs shall require a minimum of four academic years of full-time study or the equivalent. For students for whom the graduate degree constitutes the first professional degree in planning, a minimum of two academic years of full-time study or the equivalent in planning is required.

The Sustainable Urban Planning Program is a 48-credit master's degree program (16 courses) and, as such, requires a minimum of two academic years to complete as a full-time student.

Guideline: Residency. A Program, whether undergraduate or graduate, shall normally require students' presence at the accredited program institution for a minimum of two academic years, or its equivalent. The intentions of this guideline are to ensure significant interaction with other students and with faculty, hands on collaborative work, socialization into the norms and aspirations of the profession, and observations by faculty of students' interpersonal and communication skills. Programs departing from campus-centered education by offering distance learning, international exchanges, or innovative delivery systems must demonstrate that the intentions of this guideline are being achieved, and that such programs are under supervision of

fully qualified faculty. Such determination may include, but is not limited to, evidence of faculty of record, and communications between faculty and students.

The Sustainable Urban Planning Program requires student residency. and does not offer any fast tracking or dual degrees.

Guideline: Fast-tracking. Programs that combine undergraduate education with a graduate degree in planning in a total of less than six academic years or the equivalent shall meet the criteria of an accredited graduate degree.

The Sustainable Urban Planning Program does not offer any fast tracking.

Guideline: Dual Degrees. Programs may allow a degree in planning to be earned simultaneously with a degree in another field, in less time than required to earn each degree separately. All criteria of an accredited graduate degree in planning must be met and the electives allowed to meet requirements of the other degree must be appropriate as electives for a planning degree.

The Sustainable Urban Planning Program does not offer any dual degrees

E. Primary Focus

The degree Program's primary focus shall be that of preparing students to become practitioners in the planning profession.

The mission of SUP is to train the next generation of leaders in the field of urban planning. Specifically, the program makes the triple bottom line of economic, social, and environmental sustainability the focus of urban planning in order to achieve competitive, inclusive, and ecological cities. The Sustainable Urban Planning Program—which awards a master’s degree, plus two graduate certificates—meets its objectives by graduating practitioners who work in sustainable development, both nationally and internationally. In doing so, SUP aims to significantly expand the reach of the planning profession by placing its students and alumni in positions traditionally dominated by practitioners of the natural and social sciences. Above all, SUP seeks to be known for its primacy in climate change adaptation and mitigation—by training planners to address the consequences of global warming. The impact of SUP is measured by its success in elevating the field of urban planning as a force for addressing the problems that humanity must face in the oncoming future of anthropogenic climate change.

2. DEGREE PROGRAM AND INSTITUTION

A. Degree Title

Master of Professional Studies in Sustainable Urban Planning

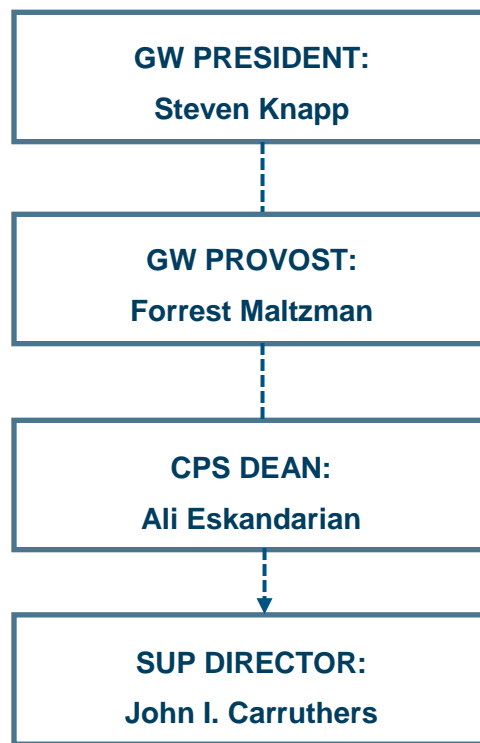
B. Name of Planning Program or Unit

The Sustainable Urban Planning Program

C. Institutional Structure

The following diagram shows that the director of SUP resides in a linear chain of command, directly accountable to: the dean of CPS; the provost of GW; and, ultimately, the president (CEO) of GW.

The diagram contained in Appendix IVC 5-A shows the complete organizational chart for CPS. This chart also illustrates that the director of SUP is directly accountable to: the dean of CPS. It illustrates that the director is parallel to a set of associate deans, namely for: administration and partnerships; academic excellence; new initiatives; and learning and academic excellence. Below academic excellence, there is also an assistant dean of students. Each of these positions plays an important part in the governance of SUP, as detailed in Part III, Standard 5.



3. OTHER PLANNING PROGRAM OFFERINGS

A. Degree Title

There are no other degrees offered within the Sustainable Urban Planning Program

B. Non-Degree Programs

The SUP offers two graduate certificates:

1. The Graduate Certificate in Sustainable Urban Planning is tailored to students seeking a credential in the field, but who are not in need of a complete master's degree. The certificate consists of six courses: a sequence of four required courses plus two more. The purpose of electives is to facilitate flexibility by enabling students to fine-tune their study and engage with the broader Sustainable Urban Planning Program.
2. The Graduate Certificate in Climate Change Management and Policy is tailored to students seeking a credential in the field, but who are not in need of a complete master's degree. The certificate consists of six courses: a sequence of four required courses plus two more. The purpose of electives is to facilitate flexibility by enabling students to fine-tune their study and engage with the broader Sustainable Urban Planning Program.

Students in the two certificate programs represent (approximately: the number varies a lot from year-to-year) 15% - 25% of all students enrolled in SUP. They tend to be very high quality because they are often students already having a master's degree—for example, in public policy, real estate, or engineering—in an allied field that want to gain a planning credential. As explained in Part III, Standard #2 the certificates are also a major component of SUP's recruitment and retention toolbox: students often enter the MPS via a certificate program and, if necessary can also leave the MPS via a certificate program. These options make SUP inherently flexible and make it easier for students to commit to the program, especially since they are able to leave with a certificate that can coupled with another credential—for example, when they have transferred to the GW business school or another university.

4. STUDENTS

Table 4.A. STUDENT ENROLLMENT DATA

Academic Year		2011 – 2012	2012 – 2013	2013 – 2014	2014 – 2015	2015 – 2016	2016 – 2017
# Applications Reviewed for Admission		30	28	41	31	38	33
# Applicants Admitted		28	24	39	31	36	33
# New Students Admitted Who Enrolled	Fulltime	17	8	6	11	10	12 *
	Part-time	2	6	4	2	5	2 *
	Dual degree	–	–	–	–	–	–
# Total Students Enrolled	Fulltime	17	26	31	20	23	39
	Part-time	2	4	4	3	7	8
	Dual degree	–	–	–	–	–	–

* Projected as of 08/01/2016.

Table 4.B. STUDENT COMPOSITION

STUDENTS - RACE AND ETHNICITY <i>Race - US Citizens and Permanent Residents Only</i>	Enrollment Status and Gender				
	Full-time		Part-time		Total
	Male	Female	Male	Female	
White	6	10	3	2	21
Black or African American	1		1		2
American Indian or Alaska Native					
Asian					
Native Hawaiian and Other Pacific Islander					
Some Other Race alone					
Two or More Races			1		1
Unknown	1	2			3
Total US Citizens and Permanent Residents Only	8	12	5	2	27
Foreign Students	2	8			10
Total Students	10	20	5	2	37
*Ethnicity - US Citizens and Permanent Residents Only					
Hispanic or Latino					
not Hispanic or Latino					

*Ethnicity does not replace Race as a separate category. Ethnicity data supplements Race data.

A detailed breakdown of every course ever offered by SUP is provided in Appendix IVC 4-A. (Note that, for the sake of consistency, the tables in Appendix IVC 4-A all use current course numbers and titles, which have evolved and been modified somewhat since 2014.) The bottommost tabulations show that the mean class size across all courses is 10.1 students; when classroom classes only (that is, setting aside the self-paced capstone practicum, and independent study courses—the mean class size is 10.51 students. The same tables show that enrollments are split nearly 50/50 by men and women, and that the average grade earned is approximately 3.6.

5. FACULTY

A. Faculty Composition

For PAB accreditation purposes, faculty are defined as follows:

(A) Full-time in Planning Unit – tenure track faculty with a primary appointment in the planning unit. Graduate teaching assistants are excluded.

(B) Part-time in Planning Unit – tenure track faculty from other academic departments in the University who teach: graduate core courses required for the planning degree; courses in other departments required for planning concentrations/specializations; and/or courses in other departments taken as an elective by a critical mass of planning students. Graduate teaching assistants are excluded.

(C) Adjunct/Contract/Non-tenure track – non-tenure track faculty and faculty hired with multi-year and annual contracts.

As explained below under the “Program History” within Part II, SUP has no tenure track faculty, including the director, so all of the program’s faculty fall under category (C). Like each-and-every program within CPS, the program: (i) employs a single full-time faculty member, who teaches in the program and serves as director; (ii) offers no tenure, including to the program director; and (iii) is composed of adjunct faculty who are based at organizations external to the university. These differences are not unique to SUP: they are very much part of GW’s structure and apply every program within CPS. This is the CPS business model and it is how GW has organized its professionally-oriented programs—intentionally, with the purpose ensuring that the university’s professional programs are tied directly to the professions they serve.

Table 5.A. FACULTY COMPOSITION

FACULTY - RACE AND ETHNICITY	Teaching Status and Gender						
	Full-time in Planning Unit (A)		Part-time in Planning Unit (B)		Adjunct/Contract/Non-tenure track (C)		Total
Race - US Citizens and Permanent Residents Only	Male	Female	Male	Female	Male	Female	
White	-	-	-	-	7	2	9
Total US Citizens and Permanent Residents only	-	-	-	-	7	2	9
Foreign	-	-	-	-			
Total Faculty	-	-	-	-	7	2	9
*Ethnicity - US Citizens and Permanent Residents Only							
Hispanic or Latino	-	-	-	-	-	-	-
not Hispanic or Latino	-	-	-	-	-	-	-

* Ethnicity does not replace Race as a separate category. Ethnicity data supplements Race data.

B. AICP Membership

Table 5.B. FACULTY AICP MEMBERSHIP

Full-Time Faculty (A): 0	Part-Time Faculty (B): 0	Adjunct/Contract/Non-tenure track Faculty (C): Andrew Bernish	Total: 1
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C. Teaching FTEs

Please provide the Program's definition/formula for a full-time teaching load: 4 courses, or 12 credits.

Table 5.C. TEACHING FACULTY FTEs

	FACULTY MEMBER NAME	STATUS (A, B OR C)	TEACHING FTE
1	<i>The number of rows should equal "Total Faculty" (table 5.A.)</i>		
2	Andrew Bernish	C	0.50
3	Anthony G. Bigio	C	0.25
4	John I. Carruthers	C	0.50
5	Rachael Jonassen	C	0.25
6	Mesbah Motamed	C	0.50
7	Chris Pyke	C	0.25
8	Scott Sklar	C	0.25
9	John V. Thomas	C	0.50
10	Sandra Whitehead	C	0.50
	TOTAL TEACHING FTEs		3.50

D. Student/Teaching Faculty Ratio

Graduate students at the George Washington University are considered full time if enrolled for nine or more credits per semester. The Sustainable Urban Planning Program runs classes during the fall and spring semesters—and over the summer. Therefore, for the purposes of this SSR, students are considered full time if they enroll for 18 or more credits in a calendar year, including the summer semester. In practice, the precise number of credits that individual SUP students register for varies by where they are in the program; their finances; external demands, including work and family; and more.

Part-time Student FTE, including calculation (if applicable): FTE: (7) * (.5) = 3.5
 Student/Teaching Faculty Ratio, including calculation: (30 + 3.5) / 3.50 = 9.6.

E. Faculty Listing

Table 5.E. FACULTY LISTING

NAME	RANK \ TENURE	YEAR APPOINTED	DEGREE	DATE	FIELD	DEGREE GRANTING UNIVERSITY	% of Time to Program* 2015-2016	% of Time to Program* 2016-2017
C Faculty								
Andrew Bernish	Adjunct	2013	MCP	2012	Community Planning	University of Maryland	50% Teaching	50% Teaching
Anthony G. Bigio	Adjunct	2013	MS	1982	Planning and Housing in Developing Countries	University of Venice	25% Teaching	25% Teaching
John I. Carruthers	Director	2011	Ph.D.	2001	Urban Design and Planning	University of Washington	25% Admin 50% Teaching 25% Research	25% Admin 50% Teaching 25% Research
Rachael Jonassen	Adjunct	2015	Ph.D.	1979	Geology	Pennsylvania State University	25% Teaching	25% Teaching
Mesbah Motamed	Adjunct	2014	Ph.D.	2009	Agricultural Economics	Purdue University	50% Teaching	50% Teaching
Chris Pyke	Adjunct	2012	Ph.D.	2002	Geography	UC Santa Barbara	25% Teaching	25% Teaching
Scott Sklar	Adjunct	2012	MA	1974	International Policy	Antioch University	0% Teaching	0% Teaching
John V. Thomas	Adjunct	2011	Ph.D.	2003	City and Regional Planning	UC Berkeley	50% Teaching	50% Teaching
Sandra Whitehead	Adjunct	2015	Ph.D.	1994	Public Administration	Florida State University	50% Teaching	50% Teaching

* For the most recent two years: Include percentage of time devoted to the Program. Include additional time devoted to other degrees or teaching components of the planning unit, and to planning program-related release time activities (e.g. administrative duties, research, university service, etc.).

6. CURRICULUM

A. Number of Credits Required for Graduation

48 credits = 16 courses

B. Calendar System

Semester

C. Curriculum

Table 6.C. COURSES TAUGHT IN THE PAST TWO YEARS OF THE GRADUATE PROGRAM

COURSE NUMBER AND TITLE*	FALL 2014 FACULTY**	SPRING 2015 FACULTY**	SUMMER 2015	FALL 2015 FACULTY**	SPRING 2016 FACULTY**	SUMMER 2016
COURSES REQUIRED OF ALL STUDENTS						
6201	<i>Bernish</i>			<i>Bernish</i>		
6202	<i>Carruthers</i>			<i>Carruthers</i>		
6203	<i>Motamed</i>			<i>Carruthers</i>		
6204				<i>Whitehead</i>		
6210	<i>Thomas</i>				<i>Thomas</i>	
6211		<i>Thomas</i>	<i>Thomas</i>			
6212		<i>Motamed</i>	<i>Motamed</i>		<i>Carruthers</i>	
6220		<i>Bigio</i>				
6221		<i>Bigio</i>	<i>Jonassen</i>		<i>Jonassen</i>	
6223		<i>Pyke</i>				
6230				<i>Whitehead</i>		
6233	<i>Carruthers</i>	<i>Carruthers</i>	<i>Carruthers</i>	<i>Carruthers</i>	<i>Carruthers</i>	<i>Carruthers</i>

COURSE NUMBER AND TITLE*	FALL 2014 FACULTY**	SPRING 2015 FACULTY**	SUMMER 2015	FALL 2015 FACULTY**	SPRING 2016 FACULTY**	SUMMER 2016
REQUIRED SPECIALIZATION COURSES						
6222				<i>Pyke</i>		
6224	<i>Sklar</i>			<i>Sklar</i>		
6260		<i>(Sust. Landscapes)</i>		<i>(Sust. Landscapes)</i>	<i>(Sust. Landscapes)</i>	
6261		<i>(Sust. Landscapes)</i>		<i>(Sust. Landscapes)</i>	<i>(Sust. Landscapes)</i>	
6262		<i>(Sust. Landscapes)</i>				<i>(Sust. Landscapes)</i>
6268			<i>(Sust. Landscapes)</i>			<i>(Sust. Landscapes)</i>
6266				<i>(Sust. Landscapes)</i>		
ELECTIVE COURSES						
6213		<i>Carruthers</i>				
6231	<i>Carruthers</i>	<i>Carruthers</i>	<i>Carruthers</i>	<i>Carruthers</i>	<i>Carruthers</i>	<i>Carruthers</i>
6235		<i>Carruthers</i>	<i>Carruthers</i>		<i>Carruthers</i>	<i>Motamed</i>
6264		<i>(Sust. Landscapes)</i>			<i>(Sust. Landscapes)</i>	

*SUP courses have recently become accessible to upper-division undergraduates through GW's Sustainability Collaborative, but no meaningful number (if any) have been enrolled. Italics = adjunct/contract/non-tenure track faculty (C in table 5.C.)

D. Curriculum Map

The SUP curriculum has been developed, implemented, and refined with careful attention to PAB standards. It also has a unique character reflecting the culture and mission of the program, which is to train the next generation of leaders in the field of urban planning. The program makes the triple bottom line of economic, social, and environmental sustainability the focus of urban planning in order to achieve competitive, inclusive, and ecological cities. The impact of SUP is measured by its success in elevating the field of urban planning as a force for addressing the problems that humanity must face in the oncoming future of anthropogenic climate change. The curriculum has also been developed, implemented, and refined with careful attention toward meeting this goal. The program has a strong grounding in neoclassical economics—the skill

identified in a recent market analysis commissioned by CPS as being in high demand within the policy-rich Washington, DC region. This market analysis, conducted by an independent research firm is contained in Appendix IVC 6-A, Page 14 presents two charts entitled “Top Skills for Individuals with Urban Planning Skills.” The first of these, for the Washington, DC region, ranks economics first while the second of these, for the nation, ranks land use first. So, the SUP curriculum has been attuned to PAB standards; is specific mission; and the demands of the labor market in which it resides.

Table 6.D. CURRICULUM MAP – Graduate Degree

Curriculum Map Courses Required of All Students		PSUS 6201: Principles of Sustainable Urban Planning	PSUS 6202: Urban & Environmental Economics	PSUS 6203: Research Methods for Planners	PSUS 6204: Legal Frameworks	PSUS 6210: Transportation Planning in City Systems	PSUS 6211: Regional Development and Ag. Economics	PSUS 6212: Sustainable Communities I	PSUS 6220: Planning Resilient and Low-Carbon Cities	PSUS 6221: Scientific Basis for Climate Change	PSUS 6223: Sustainable Communities II	PSUS 6230: Studio	PSUS 6233: Capstone – Concentration-specific
A. Required Knowledge, Skills and Values													
A1 General Planning Knowledge													
a) Purpose and Meaning of Planning		M			M		F	F	F		F	M	
b) Planning Theory		M			M	F	F	F				M	
c) Planning Law		M			M							M	
d) Human Settlements and History of Planning		M	M		M	M	F				M	M	
e) The Future		M	F		F	M	F			F	M	M	
f) Global Dimensions of Planning			M			F	M		M	F			
A2 Planning Skills													
a) Research		F	F	F	M		F		F	F		F	M
b) Written, Oral and Graphic Communication		F		F	M			F	F	M	F	F	M
c) Quantitative and Qualitative Methods				M			F			M			
d) Plan Creation and Implementation						F	F	F			F		
e) Planning Process Methods		M			F	F						M	
f) Leadership					F	F							
A3 Values and Ethics													
a) Professional Ethics		M			F					F		M	
b) Governance and Participation		F			M	M		F	F			F	
c) Sustainability and Environmental Quality		F	F		F	M	F	F	M	M		F	M
d) Growth and Development		F	M		M	M	M			F		F	
e) Social Justice		M			M	M	F	F				M	

For the curriculum map, please refer to the following legend:

- F = FAMILIARIZED
- M = MASTERED

Often the topics addressed in the curriculum map are woven into multiple courses offered within SUP's curriculum. Therefore, the delineation of "familiarized" and "mastered" depicts the classes in which the topic is most predominant. Those classes for which the criterion is "familiarized" address the topic and provide students with an understanding of the main tenants of the criterion beyond a mere introduction. Whereas "mastered" denotes those classes that provide a deeper understanding and serve as vanguard courses within the SUP curriculum for each topic. These delineations are referenced again in Standard #4. They also align with GW's internal assessment standards, which are designed to evaluate the level (across three tiers) at which students acquire knowledge and skills in individual cases and across the MPS curriculum as a whole. A detailed breakdown of every course ever offered by SUP is provided in Appendix IVC 4-A. The bottommost tabulations show that the mean class size across all courses is 10.1 students; when classroom classes only (that is, setting aside the self-paced capstone practicum, and independent study courses—the mean class size is 10.51 students. The same tables show that enrollments are split nearly 50/50 by men and women, and that the average grade earned is approximately 3.6.

PSUS 6230 and PSUS 6233 (Studio and Capstone respectively) are not described within Part III Standard 4 as these courses are concentration specific and often tailored to individual students. Collectively these courses provide the knowledge, skills, and values as notated within the curriculum map.

CURRICULUM MAP – Areas of Specialization (Climate Change Policy Management and Policy)

<p style="text-align: center;">Curriculum Map</p> <p style="text-align: center;">Climate Change Management and Policy Concentration (* denotes required specialization courses)</p>		<p style="text-align: center;">PSUS 6222: Sustainable Building: Energy Demand, Efficiency, Supply*</p>	<p style="text-align: center;">PSUS 6224: Sustainable Energy for Cities and the Environment*</p>	<p style="text-align: center;">PSUS 6225: Climate Change Economics*</p>	<p style="text-align: center;">PSUS 62XX: Elective (please refer to Electives Curriculum Map)</p>
B1 Areas of Specialization					
<i>Climate Change Management and Policy specific knowledge as it relates to...</i>					
a) Planning Theory		F	F		
b) The Future		F	F	F	
<i>Climate Change Management and Policy specific skills as they relate to...</i>					
a) Research		F		F	
b) Written, Oral and Graphic Communication		F		F	
c) Quantitative and Qualitative Methods		M		M	
d) Plan Creation and Implementation		F	F		
<i>Climate Change Management and Policy specific values as they relate to...</i>					
a) Sustainability and Environmental Quality		F	F		
b) Growth and Development		M	M		
c) Social Justice		F	F		

PSUS 6225, Climate Change Economics, is a new/future course offering and as such, no narrative for this course's mapped knowledge, skills, and objectives are provided in Part III, Standard #4.

CURRICULUM MAP – Areas of Specialization (Sustainable Landscapes)

<p align="center">Curriculum Map</p> <p align="center">Sustainable Landscapes Concentration</p> <p align="center">(* denotes required specialization courses)</p>		<p align="center">PSUS 6260: Introduction to Sustainable Design *</p>	<p align="center">PSUS 6261: Ecology of the Built Environment *</p>	<p align="center">PSUS 6262: Tools for Sustainable Design*</p>	<p align="center">PSUS 6266: Ecological Restoration*</p>	<p align="center">PSUS 6268: Sustenance and the Landscape*</p>	<p align="center">PSUS 62XX: Elective (please refer to Electives Curriculum Map)</p>
B1 Areas of Specialization							
<i>Climate Change Management and Policy specific knowledge as it relates to...</i>							
a) Planning Theory		F	F	F	F	M	
b) The Future		F	F	F	F	M	
<i>Climate Change Management and Policy specific skills as they relate to...</i>							
a) Research		F	F	F		F	
b) Written, Oral and Graphic Communication		F		F			
d) Plan Creation and Implementation		F	F	F	F	F	
<i>Climate Change Management and Policy specific values as they relate to...</i>							
a) Governance and Participation		F					
b) Sustainability and Environmental Quality		F	F	F	F	F	
c) Growth and Development		F	F	F		F	

CURRICULUM MAP – Electives

Curriculum Map Electives		PSUS 6213: Research Methods II: Advanced Geospatial and Econometric Analysis	PSUS 6231: Practicum (Individualized)	PSUS 6235: Food and Cities (Advanced Topics – Summer)	PSUS 6264: Native Plants
B1 Electives					
<i>Sustainable Landscapes specific knowledge as it relates to...</i>					
a) Purpose and Meaning of Planning				F	
b) Planning Theory		F		F	F
c) Human Settlements and History of Planning				F	
d) The Future				F	
<i>Sustainable Landscapes specific skills as they relate to...</i>					
a) Research		M		F	F
b) Written, Oral and Graphic Communication		F		F	
c) Quantitative and Qualitative Methods		M			F
<i>Sustainable Landscapes specific values as they relate to...</i>					
a) Governance and Participation				F	
b) Sustainability and Environmental Quality					F
c) Growth and Development				F	
c) Social Justice				F	

PSUS 6231, SUP Practicum, is a dedicated internship elective course, which is responsive to the needs of working professionals and to the demands of the job markets that it serves. Therefore, no narrative for this course’s mapped knowledge, skills, and objectives are provided in Part III, Standard #4.

E. Other Learning Activities

The Sustainable Urban Planning Program regularly hosts major networking events in the form of research symposiums that bring faculty from other universities and/or practitioners from innovative organizations to GW. These events are free and open to the public. They generally attract 80 - 120 people and are forums for introducing SUP and its students to the profession, and other stakeholders. Fliers announcing these symposiums are contained in Appendix IVC 1-C. These are not required activities but they are highly visible events designed to be excellent for professional networking and presenting the SUP and its students to the Washington, DC region. Other learning activities include conferences and other events at institutions, agencies, and other organizations across the region. An annual project that supports SUP student learning is the program's ongoing engagement with the World Bank's Land and Poverty Conference. Every year since 2013, SUP students have been hired by the World Bank to serve as organizers, room monitors, and registration assistants for this major event, which draws approximately 1,000 practitioners, academics, officials, and others from arid the globe; SUP has already met with the World Bank to begin planning for the March 2017 meeting. (Appendix IVC 8-A, which contains news items on SUP includes a story published in GW Today on March 23, 2015 about SUP's partnership with the World Bank.) Finally, SUP students are actively encouraged to attend the local and national meetings of the American Planning Association and other conferences, including the meetings of the Associated Collegiate Schools of Planning and meetings held under the aegis of the Regional Science Association International.

7. PROGRAM HISTORY:

When addressing the SUP program within a historical context for the purposes of a self-study, it is necessary to make note of certain key differences between the program and more traditional academic units that come before the Planning Accreditation Board (PAB). Specifically, the program is stationed within the George Washington University's (GW's) College of Professional Studies (CPS), which operates on a non-profit business model outside of the university's tenure system. The college—which was founded in 2001; includes more than degree 20 programs; and serves more than 1,000 students annually—is engineered to be responsive to the rapidly evolving demands of professional fields, planning among them. Higher education has indisputably entered a new era, and units of all kinds face difficult challenges in delivering high-quality academics efficiently and cost effectively. The difficulties in higher education, discussed throughout this SSR, are systemic—some details are provided in Appendix IVC 6-B. SUP was born into this environment and, therefore, has been engineered for it. Still, it is important to recognize upfront that meeting these new realities requires doing some things differently.

In the case of SUP, this means operating on a low-overhead model with three characteristics that diverge from the Planning Accreditation Board's guidelines. In particular, like all programs within CPS, the program: (i) employs a single full-time faculty member, who teaches in the program and serves as director; (ii) offers no tenure, including to the program director; and (iii) is composed of adjunct faculty who are based at organizations external to the

university. To be clear, these differences are not unique to the Sustainable Urban Planning Program: they are very much of GW's structure and apply every program within CPS. Most important, the fact is that they are differences in mode of operation—not differences in substance.

Indeed, since its inception, the Sustainable Urban Planning Program has been implemented with strict attention to both the very high standards of GW and the substantive guidelines of PAB. (Communication between the organizations dates to July 2011.) Great care is taken throughout the self-study—and accompanying strategic plan—to explain exactly how SUP functions and how, in spite of pro forma differences, the program aligns with the Planning Accreditation Board's standards and criteria. Great care is also taken to demonstrate how the operational model—the SUP Paradigm—leverages, mitigates, and/or otherwise addresses the specific array of strengths, weaknesses, opportunities, and threats inherent to it. The portrait that emerges is of a high-performing, fully-resourced, and self-sufficient urban planning program built for excellence and long-term viability—in short, a program that has earned its place at a premier university and is a worthy candidate for accreditation

In May 2016, GW's SUP completed its fifth academic year. While the program operates on a non-traditional model, since inception great care has been taken to develop and implement it in a manner that meets the spirit of PAB guidelines. The goal from the beginning has been to create an enduring program engineered to rise to—and remain at—the very top of the planning profession. Initial development of the program began in 2010 and it was implemented with the hiring of the director at the end of that year. The set of faculty came together as the program matured between 2011 and 2013; the Sustainable Urban Planning Student Organization was chartered in early 2012; and the first master's degrees were conferred following the Fall 2013 semester. In this short time, SUP has ascended high—by way of a collaborative building process that has engaged its faculty and students; its peers at universities worldwide; the planning profession, nationally and internationally; and, increasingly, its alumni.

Long-term visioning for SUP commenced in 2013. Its mission, objectives, and core values were formulated in that year; vetted internally through late 2014; and finally made public in early 2015, via the program's website. The process yielding this document was initiated shortly thereafter, when the director worked with the leadership of CPS, in which Sustainable Urban Planning is situated, to carefully consider the program's long-term prospects. That step led, first, to a thorough market analysis, conducted by an external consulting firm, and, next, to a rigorous internal evaluation that placed SUP on track to start pursuing accreditation from PAB in 2016. Actual strategic planning began in mid-2015 in the form of one-on-one conversations that the program director held with the college leadership; program faculty, students, and alumni; members of the profession; and faculty from peer programs. The process culminated—after PAB responded affirmatively to the university's letter of intent—in a series of strategic planning sessions that involved as many stakeholders as possible, including nearly all faculty, most students, and a number of alumni. The result was document, "Looking to 2026: A Strategic Plan for SUP," which is a collaborative document articulating the evolution of the program over the past five years and its actions and ambitions for the next ten. The strategic plan is included as Appendix IVC 1-A to this self-study report.

By April 1, 2016 SUP had graduated 25 MPS students who, as shown in Appendix IVC 2-B, have all entered the workforce and/or moved on to another degree program. Positions occupied

by SUP alumni (as of May 2016) include urban planning positions at leading organizations, including within the federal government, the World Bank, local planning departments, international development NGOs, intergovernmental organizations; and more. According to statistics listed in Appendix IVC 4-A, approximately 8 additional students are in the process of wrapping up, as indicated by the total number (33) number who have enrolled for their capstone. Some of these students have submitted their projects, but it is up to them to decide when to apply for graduation (i.e.: August 2016; January 2017; or May 2017) and approximately 8 - 10 are expected to enroll for their capstone projects during the 2016 - 2017 academic year, meaning that there will be an additional set of people who will apply for graduation sometime during the next cycle (i.e.: May 2017; August 2017; or January 2018). Students are guided through their capstones and graduation process, but when, specifically, they choose to graduate is variable and typically depends on their personal lives, professional goals, and/or how long they wish (for whatever reason) to remain a student at GW. In the last case, some (but certainly not all) foreign students, for example, tend to extend their work for an extra semester in order to use the extra time to gain additional experience in the United States—whether through internships or simply a slower pace of study.

PART III: ACCREDITATION STANDARDS AND CRITERIA

STANDARD #1 – MISSION AND STRATEGIC PLAN

The Program or the Department in which it resides shall have a clearly defined mission supported by goals and measurable objectives appropriate to the profession of planning. The Program shall have a strategic plan for achieving its goals and objectives – either as a free-standing plan or as part of a broader departmental strategic plan – and must be able to demonstrate progress toward their attainment.

The mission of SUP is to train the next generation of leaders in the field of urban planning. Specifically, the program makes the triple bottom line of economic, social, and environmental sustainability the focus of urban planning in order to achieve competitive, inclusive, and ecological cities. The Sustainable Urban Planning Program—which awards a master’s degree, plus two graduate certificates—meets its objectives by graduating practitioners who work in sustainable development, both nationally and internationally. In doing so, SUP aims to significantly expand the reach of the planning profession by placing its students and alumni in positions traditionally dominated by practitioners of the natural and social sciences. Above all, SUP seeks to be known for its primacy in climate change adaptation and mitigation—by training planners to address the consequences of global warming. The impact of SUP is measured by its success in elevating the field of urban planning as a force for addressing the problems that humanity must face in the oncoming future of anthropogenic climate change. This mission is detailed in SUP’s ten-year strategic plan entitled “Looking to 2026: The SUP Strategic Plan,” contained in Appendix IVC 1-A. The strategic plan is a collaborative document that includes five specific actions, which comprise both short-term and long-term objectives, that serve as benchmarks for progress toward the program’s vision for its future.

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- A. **Strategic plan:** The strategic plan must address the Program’s vision; its definition of mission fulfillment; the elements identified as necessary to carry out the plan (including financial resources); the process by which the strategic plan is developed, refreshed, and disseminated; and a method for evaluating progress and making improvements. Programs must document participation in plan development by faculty, students, alumni, and practitioners. It is suggested that practitioners include a broad spectrum of the profession who can be resources for the Program during plan development and implementation.
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This document presents a strategic plan for the George Washington University’s Sustainable Urban Planning Program (SUP) through 2026—and explains how the program’s goals ambitions will be met.

The mission of SUP is to train the next generation of leaders in the field of urban planning. The program does this by making the triple bottom line of economic, social, and environmental sustainability the focus of planning in order to achieve competitive, inclusive, and ecological cities. The impact of SUP is measured by its success in elevating the field of urban planning as a

force for addressing the problems that humanity must face in the oncoming future of anthropogenic climate change.

The strategic planning process identified a salient strength and opportunity, which may alternatively be viewed, respectively, as a weakness and threat. The strength is that the director operates with considerable autonomy and is empowered to take a wide range of actions on behalf of SUP, keeping the program efficient and cost effective. The weakness lies in the fact that, superficially, SUP appears to hinge on this one individual. Meanwhile, as an active member of the George Washington University's Sustainability Collaborative, SUP has the opportunity to be among the university's crown jewels. However, SUP must remain cognizant of the threat posed by the fact that it is not an essential function of the university and, therefore, must distinguish itself as an unquestionably exceptional program in order to remain valuable.

In just a few short years, SUP has accomplished what might reasonably be expected of a small- to mid-sized department of full-time faculty. The program's immediate goals are to attain accreditation through the Planning Accreditation Board and secure upward trends in enrollment, quality, and financial stability. Looking toward the future, SUP will move to establish: a travel assistance fund for students who present their work at the national meetings of the American Planning Association and/or the meetings of the Associated Collegiate Schools of Planning; a new concentration focused on sustainable urbanization in Asia; a professional advisory board no later than January 2017; a second faculty full-time equivalent; and merit-based scholarships for students from least developed countries. These specific actions will be taken in order to ensure SUP's place at the George Washington University for the long-term and position it in the top tier of urban planning programs by 2026.

As noted throughout the strategic plan, SUP's ambitions are national and international in scope. The program has taken students to Seoul, South Korea three times in its five-year history (see the table on 6235 Korea Studio in Appendix IVC 4-A) and a picture from the program's most recent trip—which included student presentations at Chung-Ang University, Seoul National University, and Yonsei University, plus numerous site visits—is displayed on the cover of the strategic plan. The program is currently in the process of developing a second study abroad program, set in Dhaka, Bangladesh. A presentation given by the director to the Bangladesh Urban Forum in March 2016 as part of that effort is provided in Appendix IVC 8-B. SUP expects to take its first trip to Dhaka as a program in March 2017.

B. Mission statement: The Program shall have a clear and concise mission statement that expresses the Program's core values and fundamental purpose and role in training professional planners. The mission statement summarizes why the Program exists and the needs that it seeks to fulfill.

The mission of SUP is to train the next generation of leaders in the field of urban planning. Specifically, the program makes the triple bottom line of economic, social, and environmental sustainability the focus of urban planning in order to achieve competitive, inclusive, and ecological cities.

C. Program goals: The goals shall identify the Program's future aspirations in the context of its mission and that of the University. Goals must be meaningful in the sense that they aim

toward excellence beyond that which may already exist, while taking into account the particular characteristics of a Program, including its opportunities and constraints. Goals must be inclusively developed with participation of members of the Program's community.

The five actions emerged from the strategic planning process and each of these supports SUP's core values. The first three are inexpensive, short- to intermediate-term objectives meant to help SUP better live up to its objectives. The last two are expensive, longer-term objectives that build out the program and are contingent upon attaining PAB accreditation, plus upward trends in enrollment, quality, and financial stability. With this in mind, SUP will move to take the following specific actions:

1. Establish a travel assistance fund for SUP students who present their work at the national meetings of the American Planning Association (APA) or the Associated Collegiate Schools of Planning (ACSP).
2. Establish a new concentration focused on sustainable urbanization in Asia.
3. Establish a professional advisory board no later than January 2017.
4. Establish a second faculty full-time equivalent (FTE) within SUP.
5. Establish merit-based scholarships for students from Least Developed Countries (LDCs).

Though not exhaustive, this set of actions captures the broad sentiment of the strategic planning sessions. Smaller actions also emerged and will be implemented as time and energy allow. While other large actions could certainly be added to the list, each of those included came up repeatedly and with much interest. The estimated cost of implementing the actions listed above is estimated at approximately \$300,000 annually: \$125,500 for the FTE and \$165,000—or \$82,500 each—for two full scholarships.

D. Measurable objectives: Each goal must have concrete objectives for goal attainment. The objectives should be measurable and framed in a way that can be easily evaluated by PAB and the Site Visit Team.

Each of SUP's goals are presented as measurable objectives, which are fulfilled as follows:

1. Establish a travel assistance fund for SUP students who present their work at the national meetings of the American Planning Association (APA) or the Associated Collegiate Schools of Planning (ACSP).
 - This goal is fulfilled—and has been fulfilled at least once in the past—by subsidizing MPS students to attend meetings.
2. Establish a new concentration focused on sustainable urbanization in Asia.
 - This Goal will be fulfilled when the concentration is formally approved by GW. Work has commenced on developing the new concentration and reconfiguring the existing concentrations in a manner that makes room for the third and ensures that student choice is maximized without fragmenting the student body. A DRAFT working document, including the curriculum map presented above, is contained in Appendix IVC 1-D. This document is presented for expository purposes only, and is not final.)

It is expected that new concentration will be approved no later than April 2017. PAB can expect to see this configuration of concentrations—or a configuration that closely resembles it—by the time a site visit team arrives to observe SUP.

3. Establish a professional advisory board no later than January 2017.
 - This goal will be fulfilled once the professional advisory board is established. The director of SUP has started identifying prospective members of the advisory board and will begin meeting with faculty, students, alumni and other stakeholders in order to gather their input during the fall 2016 semester. The program intends to invite members shortly thereafter with the goal having the board established no later than January 2017.
4. Establish a second faculty full-time equivalent (FTE) within SUP.
 - This goal will be fulfilled once SUP grows a revenue stream—estimated at \$125,500 annually—sufficient for sustaining a second FTE. SUP aspires to fulfill this objective sometime in the vicinity of 2021.
5. Establish merit-based scholarships for students from Least Developed Countries (LDCs).
 - This goal will be fulfilled once SUP grows a revenue stream—estimated at \$165,000, or \$82,500 each, annually—sufficient for sustaining a second FTE. SUP aspires to fulfill this objective sometime in the vicinity of 2023.

STANDARD #2 – STUDENTS

The Program shall attract a sufficient number of well-qualified students from diverse backgrounds and shall adequately prepare, support, and advise these students to pursue and contribute successfully to the field of urban and regional planning. Accordingly, the Program shall demonstrate that its students upon graduation possess the knowledge, skills, and values that will enable them to secure professional employment, to perform effectively as planners, and to participate meaningfully in the planning profession. Because students will join an increasingly diverse workforce, and work in diverse communities affected by global pressures, the student body should be diverse. The approach to diversity should reflect the Program’s intended scope (e.g., local, regional, national, international). The Program should strive to attract a student population, particularly from groups historically lacking access to, and under-represented in, higher education, as well as representative of the type of mixtures of ethnic, racial, and economic groups to be found in the settings where planners often practice.

RECRUITMENT AND RETENTION

The Sustainable Urban Planning Program is founded on the idea that its students are its greatest asset. With this in mind, recruiting and retaining a diverse group of well-qualified students has been an ongoing standard of SUP since its inception. The group of SUP students, who have attained their degree to date, comprise ethnic and racial diversity reflective of the recruitment outreach partaken by the program. Recruitment and retention of the student body is governed by SUP’s core values, which define and give special meaning to the education from the program:

- Active Learning empowers students by giving them shared responsibility for their work inside and outside of the classroom. It makes students drivers of the learning experience and means that they take joint ownership over the goals, processes, and outcomes of their education.
- Advocacy involves using the knowledge and language of cities in an ethical manner to promote objectively desirable results—especially in the decision-making arena, and in the face of competing interests.
- Democracy is fundamental to planning in order to ensure that outcomes reflect the interests of the whole and not only those of a narrow constituency.
- Diversity is critical to planning education and practice alike because the field must take care to reflect the plurality of the cultures, landscapes, people, societies, and systems that it impacts—most especially with respect to underrepresented groups.
- Research is the engine of knowledge creation, and the scientific method is responsible for centuries of human progress. Planners need to rely on objective research whenever possible and be not only consumers of knowledge—but, also, producers of knowledge.
- World Engagement involves proactively looking outward to find opportunities to learn from and collaborate with others—nearby and around the globe. There are over seven billion people on the earth, who are becoming evermore interdependent, so planners must engage this community with the recognition that the world is growing smaller by the day.

CRITERIA:

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- A. Student Quality: The Program shall admit students whose educational attainment, previous academic performance, work experience, aptitude, maturity, and motivation indicate potential for success in their studies and in professional practice. Toward that end, the Program shall establish admission standards that reflect the institution’s policies and the Program’s goals, and the Program shall apply those standards fairly and consistently. The Program shall document its admission standards and the extent to which its current students meet or exceed those standards.
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Sustainable Urban Planning MPS students may begin in either the fall or spring semester. In order to be admitted to SUP, students must have a bachelor’s degrees from regionally accredited institutions of higher education and, generally, a cumulative grade point average of at least 3.0 is required. As a matter of choice, SUP does not use the GRE but, for foreign students, there are minimum language requirements. Detailed admissions standards and policies are available online (<https://cps.gwu.edu/application-instructions>) and these are provided in full in Appendix IVC 1-E. While SUP aspires to be an elite program it is not an elitist program: SUP is committed to evaluating applications holistically, particularly in the case of working professionals who have established themselves but (often) do not retain academic ties to their undergraduate universities. Finally, SUP also willingly considers students who do not meet the desired 3.0 cumulative grade point average—particularly if other aspects of their application are strong. In these cases, the SUP director petitions the Associate for Academic Excellence in CPS for a variance. If the variance is approved, the student is admitted provisionally, with very clear terms

that must be fulfilled, for example a minimum Grade point average in a specified number of credits. The student then evaluates the terms of the admissions offer and decides whether or not to enroll in SUP. Finally, a detailed breakdown of every course ever offered by SUP is provided in Appendix IVC 4-A. (Note that, for the sake of consistency, the tables in Appendix IVC 4-A all use current course numbers and titles, which have evolved and been modified somewhat since 2014.) The tabulations give the mean grade earned for each class each time it was offered. The bottommost tabulations show that the mean class size across all courses is 10.1 students; when classroom classes only (that is, setting aside the self-paced capstone practicum, and independent study courses—the mean class size is 10.51 students. The same tables show that enrollments are split nearly 50/50 by men and women, and that the average grade earned is approximately 3.6.

B. Student diversity: The Program shall adopt appropriate recruitment and retention strategies, including curricular strategies, to achieve its aspirations for a diverse student body, and shall document actual progress in implementing those strategies. The Program shall foster a climate of inclusivity that appreciates and celebrates cultural difference through its recruitment and retention of students. Students shall possess, in the aggregate, characteristics of diversity (e.g., racial and ethnic background) that reflect the practice settings where graduates work or where professional needs exist in the Program’s region of recruitment and placement. Notwithstanding, the demographic mix is not a static concept, and all planning programs should seek to be in the forefront of a diverse society.

In order to achieve greater diversity within the program, SUP has adopted specific recruitment and retention strategies:

- The SUP website is implemented in three languages in addition to English: Spanish, Chinese, and Korean. The program has received feedback that these translations have proved helpful in attracting well-qualified students for which English is a second language.
- The program annually spends significant marketing capital directly targeting qualified students in both Asia and Latin America.
- One of SUP’s strategic objectives is to expand access to GW from students in from LDCs in those (and other) regions of the world. Toward that end, SUP aims to develop a revenue stream—estimated at \$165,000 annually—specifically dedicated to supporting students from LDCs. This goal not only benefits the recipients, but also benefits the existing student population as the increased diversity within the student body more closely reflects the ethnic, racial, and economic groups present in settings where planners often practice.

Including the 2016 - 2017 cohort, SUP has educated students from five of humanity’s six continents: Africa; Asia; Europe; North America; and South America. SUP alumni work equally as far afield. As shown in Table 4B, the SUP student body is divided almost exactly between men and women—though the set of international students that have come to SUP is more heavily weighted toward women.

These values shape the day-to-day experience of being in SUP and give special meaning to being a graduate. As such, they serve as markers that help students select SUP (or not, as the case may be) and, in turn, help SUP select its students. As explained in the strategic plan SUP has a clearly defined culture—a culture intended to be separate and distinct from (absolutely not to be confused with better or worse than) other planning programs. The core values that give rise to this culture are the same values that channel recruitment efforts and support student retention.

In support of its core values—especially, democracy, diversity, and world engagement—the SUP website is implemented in three languages in addition to English: Spanish, Chinese, and Korean. The program has received feedback that these translations have proved helpful in attracting well-qualified students for which English is a second language. Additionally, the program annually spends significant marketing capital directly targeting qualified students in both Asia and Latin America. Moreover, one of SUP’s strategic objectives is to expand access to GW from students from LDCs in those (and other) regions of the world. Toward that end, SUP aims to develop a revenue stream—estimated at \$165,000 annually—specifically dedicated to supporting students from LDCs. This goal not only benefits the recipients, but also benefits the existing student population as the increased diversity within the student body more closely reflects the ethnic, racial, and economic groups present in settings where planners often practice. Including the 2016 - 2017 cohort, SUP has educated students from five of humanity’s six continents: Africa; Asia; Europe; North America; and South America. SUP alumni work equally as far afield.

C. Size of student body: The number of students enrolled in the Program shall be sufficient to constitute a community of inquiry that fosters each student’s educational and professional development. Graduate programs shall have a student body of 20 or more full-time equivalent (FTE) students. Similarly, undergraduate programs shall have a total of 20 or more FTE students in their third and fourth years of study. (One part-time student equates to 0.5 full-time equivalent).

As the enrollment table in Section II depicts, a total of 85 master’s students have enrolled since SUP’s first cohort entered the program in 2011. Of these, 25 students—as of April 1, 2016—have attained an MPS in Sustainable Urban Planning. The MPS requires 48 credits. A relatively large number of those students who are currently enrolled and on track to complete their MPS in the coming year—they are at varying stages of completion, depending on their personal and professional goals. A small number of these students chose to exit the MPS program—on their own volition or, occasionally, on the advice of the program director—with one of the program’s two graduate certificates. The certificates, though not the focus this SSR, work hand-in-hand with the MPS program and are instrumental to SUP’s recruiting and retention strategy. In particular, students unsure of whether or not they want to enter the planning field can try their hand, while retaining the option to move on to something else—with a worth credential in hand. (Anecdotally, one student entered the MPS program and transferred to the GW business school, SUP certificate in hand; another student entered the MPS program with a background in finance obtained a position with the Grameen Foundation, a prestigious NGO dedicated to fighting world poverty, so exited for that job, SUP certificate in hand; yet another student entered the MPS program but needed to relocate to New York City so transferred to Hunter College, SUP certificate

in hand.) Many students enter SUP via a certificate program and then evaluate whether or not they can commit—whether academically, financially, geographically or otherwise—to the 48-credit MPS program.

As documented in Appendix IVC 8-C, in March 2016 Washington, DC surpassed Philadelphia, PA to become the sixth largest metropolitan areas in the United States. Being situated in such a large region clearly has distinct advantages: GW occupies the heart of the nation’s capital, and is very much at a center of the world. Opportunities abound. On the other hand, Washington, DC is an expensive place to be as a student, so, in general, SUP students must work in order to support themselves as they go through school. It is SUP’s goal to have students working in the planning profession while they are in school, and every effort is made to get students integrated in the labor market. However, it is nonetheless difficult to support oneself in Washington, DC while studying—a challenge faced by students at most universities in major metropolitan areas. For this reason, SUP pays special attention to the work-life-school balance particular to its students.

Last, as shown in Part II of this SSR, SUP maintains an excellent student-faculty ratio—averaging about 9:1. Since it launched in 2011, SUP has maintained a student body healthy enough in size to support the community of scholarship described—as the SUP Paradigm—in the strategic plan. Here again, the two certificate programs help: as stated in Part II, at any given time, the two certificates (explicitly) account for between 15% – 25% of total enrollments within the program. These enrollments contribute to the mass of the student body and financial stability of SUP. They do not adversely affect the student-faculty ratio because certificate students are spread across the SUP program and tend to take less classes at a time than MPS students. Overall, individual classes within SUP rarely exceed 15 students; to date, the largest class that SUP has run had 19 students enrolled and this has happened only twice in the history of the program. The tabulations contained in Appendix IVC 4-A provide evidence, class-by-class. They illustrate that the mean class size across all courses is 10.1 students; when classroom classes only—that is, setting aside the self-paced capstone practicum, and independent study courses—the mean class size is 10.51 students. The same tables show that enrollments are split nearly 50/50 by men and women, and that the average grade earned is approximately 3.6.

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- D. Student advising, services, and support: The Program shall provide students with competent academic advising, progress appraisal, and career guidance, as well as access within the institution to any personal counseling that students might need. Furthermore, the Program or its institution shall provide students with career services that assist students in securing suitable internships and jobs. The Program shall also support its students by providing them with financial aid opportunities that are sufficient in number and amount to achieve the Program’s aspirations for a well-qualified and diverse student body. The Program shall publish its criteria for the allocation of such financial aid.
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Advising responsibilities are broadly distributed across SUP faculty—all of whom have strong ties to academia and are leaders in their respective fields, nationally and/or internationally—giving students the opportunity to learn from different kinds of mentors who work in different areas of the field. The CPS business model ensures that faculty bring to GW extensive professional networks and they typically serve as direct conduits to the job market,

enabling students to grow into their careers in an organic manner. The director of SUP is responsible for coordinating advising across the student body and works in close collaboration with SUP faculty as they take on mentees. within this framework, SUP students have regular and close access to faculty representing a deep pool of varied professional planning experiences. The program explicitly marshals Washington, DC's rarified professional environment in order to provide students with exposure to a broad range of career options within the field of planning. Students have also gained grant-writing assistance by assisting the SUP program director to apply and fulfill research grant applications

SUP is responsive to the needs of working professionals and to the demands of the job markets it serves. To this end, the program has a dedicated internship class (6231 – Practicum) related to the field of planning that students can elect to take. Internship opportunities are made possible by taking advantage of SUP's location within the Metropolitan Washington, DC region. Graduates and students have fulfilled the program's internship requirement with a variety of positions at non-profit, for-profit, and government institutions. Internships have been completed at institutions such as the U.S. Green Building Council, World Bank, the Inter-American Development Bank, the federal government, and local planning departments. in addition, CPS has a dedicated Career Services Program (not accessible to GW students from outside the school) that provides a number of intensive services, including: resume and cover letter review; interview coaching; networking strategies; site visits and panel discussions; gathering of career outcome data; creation of online resources specific to SUP field; one-on-one counseling appointments; group site visits; and more.

Although SUP does not yet have dedicated financial resources to provide direct monetary financial aid in the form of merit-based scholarships, the program has worked diligently to keep tuition low and, in fact, far below that of many other programs within GW. (GW has six tuition "buckets" for graduate programs and, with a \$980/credit, SUP currently resides in the fourth bucket, with three ahead of it in terms of tuition.) On an ad-hoc basis, students have many opportunities to receive financial assistance through SUP faculty, who commonly have research grants/contracts that enable them to hire students on an hourly basis. Another (small) form of financial aid and a great experience available to SUP students is the program's partnership with the World Bank to support the Bank's annual Land and Poverty Conference. This effort is coordinated by the director of SUP and operates under an arrangement wherein the World Bank directly hires GW students to serve as organizers, room monitors and registrations assistants. Students receive several days' worth of paid consulting experience with the World Bank; a senior student (who served the previous year) serves as the foreman of the operation and receives a larger contract commensurate with the hours associated with organizing and training the team. (The picture on page 5 of the strategic plan is of the March 2016 GW Land and Poverty team, taken in the main atrium of the World Bank.) Finally, as noted throughout this application, one of the Strategic Plan's five objectives is for the program to provide financial assistance in the form of merit-based scholarships for students from Least Developed Countries. Thus, despite not having merit-based scholarships currently, the program is actively working to provide these as documented within the strategic plan.

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- E. Student engagement in the profession: The Program shall provide opportunities for student engagement in the profession, including but not limited to participation in a planning student organization affiliated with the Program, in the local chapter of the American Planning Association, in other professional societies and activities, and in work, internships, community-based planning activities, or project experiences that develop their skills as planners. The Program shall also promote socialization into the planning profession by encouraging students to attend APA's planning conferences and other events in which students might interact with professional planners from a variety of backgrounds.
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SUP takes advantage of the its location at the heart of the Washington, DC metropolitan area to encourage engagement and participation in the rich array of professional planning organizations operating in close proximity. This takes also the form of representational memberships with the American Planning Association, planning conference attendance, and a chartered student organization. Furthermore, SUP coordinates its own professional networking opportunities tin the form of research symposiums and other events wherein nationally- and internationally recognized planning (and other) scholars speak on diverse issues of interest to the local planning arena.

Beginning in the fall of 2012, SUP independently sought and pursued membership within the National Capital Area Chapter (NCAC) - the local chapter of the American Planning Association. Gaining a faculty and student representative on the board of this chapter by the end of the 2012 calendar year, the program has since retained both student and faculty membership on the Chapter's board without lapse. Indeed, the Sustainable Urban Planning program's first student representative continues to serve on the National Capital Area Chapter's Executive Board, having recently been elected as the Board's secretary. Additionally, the same faculty member has maintained a role as the faculty representative for the entirety of SUP's partnership with NCAC-APA. This continual representation fosters a greater understanding and stronger relationship with the board. In so doing, the faculty representative has been able to remain actively involved with the District of Columbia's premier professional planning organization and has apprised students of networking activities, area conferences, chapter-sponsored activities, educational workshops, job opportunities, and social events in which the SUP students can meet and interact with a variety of professional planners in the immediate area.

Additionally, through SUP's involvement with the local chapter of the APA, SUP students have continually taken advantage of a free year of membership with the national APA. To date, 42 SUP students have enrolled with the APA during the student enrollment. Students within SUP are actively encouraged to attend APA's planning conferences. In addition to attending these conferences, SUP students are encouraged to present their original ideas and research at both local and national planning conferences. To date, students from the program have presented at the 2014 annual conference of the Associated Collegiate Schools of Planning (ACSP), the 2015 conference of the National Capital Area Chapter of APA, and the 2016 national conference of the American Planning Association. As one of its five specific objectives, SUP's Strategic Plan calls for the establishment of a Travel Assistance Fund of up to \$2,000 for students to present at national meetings of APA or ACSP.

SUP students chartered the Sustainable Urban Planning Student Organization (SUPSO) in March of 2012, which annually elects board members. This student organization is, among other things, a venue for democratically communicating the will of the student body ranging from new initiatives to grievances. SUPSO appoints the student representative to the National Capital Area Chapter of the APA and coordinates student activities geared at greater engagement in the field of planning. SUPSO ratified a constitution on September 27th, 2013, at which time they became an official recognized organization at George Washington University. (The constitution is attached as an Appendix IVC 2-C). The mission statement of SUPSO is in accordance with the sustainability statement for George Washington University: The George Washington University envisions a future with resource systems that are healthy and thriving for all; SUPSO envisions healthy urban landscapes that are socially equitable, economically resilient and environmentally just. It shall be the purpose of the SUPSO to engage GW, the District of Columbia and the global community through advocacy and outreach to advance the overall field of sustainable urban planning.

As noted throughout the strategic plan, SUP's ambitions are national and international in scope. The program has taken students to Seoul, South Korea three times in its five-year history (see the table on 6235 Korea Studio in Appendix IVC 4-A) and a picture from the program's most recent trip—which included student presentations at Chung-Ang University, Seoul National University, and Yonsei University, plus numerous site visits—is displayed on the cover of the strategic plan. The program is currently in the process of developing a second study abroad program, set in Dhaka, Bangladesh. A presentation given by the director to the Bangladesh Urban Forum in March 2016 as part of that effort is provided in Appendix IVC 8-B. SUP expects to take its first trip to Dhaka as a program in March 2017. These study abroad programs provide SUP students with spectacular opportunities to engage with the planning profession beyond the United States, but around the world. Korea is a global leader in urban planning for sustainable development and Bangladesh is the very front line of climate change adaptation and mitigation.

Finally, SUP regularly hosts major networking events in the form of research symposiums that bring faculty from other universities and/or practitioners from innovative organizations to GW. These events are free and open to the public. They generally attract 80 - 120 people and are forums for introducing SUP and its students to the profession, and other stakeholders. Fliers announcing these symposiums are contained in Appendix IVC 1-C. These are not required activities but they are highly visible events designed to be excellent for professional networking and presenting the SUP and its students to the Washington, DC region. Other learning activities include conferences and other events at institutions, agencies, and other organizations across the region. An annual project that supports SUP student learning is the program's ongoing engagement with the World Bank's Land and Poverty Conference. Every year since 2013, SUP students have been hired by the World Bank to serve as organizers, room monitors, and registration assistants for this major event, which draws approximately 1,000 practitioners, academics, officials, and others from around the globe; SUP has already met with the World Bank to begin planning for the March 2017 meeting. (Appendix IVC 8-A, which contains news items on SUP includes a story published in GW Today on March 23, 2015 about SUP's partnership with the World Bank.) Finally, SUP students are actively encouraged to attend the local and national meetings of the American Planning Association and other conferences, including the meetings of

the Associated Collegiate Schools of Planning and meetings held under the aegis of the Regional Science Association International.

STANDARD #3 - FACULTY

The Program shall employ a sufficient number of high quality, productive, and engaged faculty members to permit the achievement of program goals and objectives.

Faculty are recruited on the basis of their expertise and ability to commit to SUP long-term (indefinitely) plus their ability to teach at least one and in most cases two classes annually. SUP is built on a framework that leverages Washington, DC's rarefied pool of intellectual talent to form a program whose faculty are mostly based outside of GW. As stated below under "Program History," there is no tenure in SUP. The program director works full-time on a rolling 12-month multi-year contract and faculty are effectively tenured into their courses through union rules that guarantee the right of first refusal after they are vested. In many ways, this approach represents a vanguard of graduate education, though it should be clear that location matters: such a model would not be possible without the many experts working in the region's elite public, private, and nonprofit organizations who might otherwise be stationed at universities.

Faculty are recruited to SUP on the basis of course-specific need. Some—but not all, or even most—have come to the program via the director's professional network. Others have come to SUP via the professional networks of the SUP faculty (for example John Thomas and Chris Pyke collaborate professionally, outside the bounds of GW) and still others come through GW (for example, Rachael Jonassen and Scott Sklar also hold faculty appointments, respectively, in the GW engineering and business schools.) Additional faculty members (for example, Tony Bigio [see the story in GW Today contained in Appendix IVC 8-A] and Sandra Whitehead) have approached SUP out of interest in becoming involved after discovering the program. As with any academic unit, the unit and faculty must choose each other—that is, SUP faculty are recruited and retained on the basis of fit with the program's mission and, as well, the SUP faculty gravitated to the program out of a desire to contribute to this mission, often after observing student performance. The SUP faculty often begin through a preliminary engagement, interaction with students and exiting SUP (and other GW) faculty over a semester and/or by participating in SUP research symposiums and guest lectures. Once the relationship is established, they teach an initial course—sometimes under the auspices of 6235, SUP's special topics course, which can be used for any number of purposes—and then are contracted by GW as adjuncts. GW's adjunct faculty are unionized (see: <https://facultyaffairs.gwu.edu/part-time-faculty>) under a collective bargaining agreement that grants them the right of first refusal after they have taught their class three times. This means that SUP faculty are effectively tenured into their classes. The agreement also provides funding for professional development and travel (<https://facultyaffairs.gwu.edu/part-time-faculty-professional-development-fund-ptfpdf>).

Given that the SUP faculty are external to GW a fundamental criterion is that they must be established within their own organizations, so that they have the stability and flexibility to commit to SUP indefinitely. SUP faculty teach at least one annually—and several teach twice (i.e.: two different courses) annually. (There was some "churn" in faculty during the first two years of SUP's operation as the program worked to establish the right set of personnel, but no more than

is typical of any fledgling program.) All SUP faculty have completed intellectual freedom and teach how and what they chose. The curriculum is implemented with close attention to PAB standards—which all SUP faculty, including those that come from outside the planning sphere, are made familiar with—and faculty meet regularly one-on-one with the program director and as a group to coordinate teaching across the curriculum. As demonstrated by the CVs contained in Appendix IVA all SUP faculty are nationally and internationally recognized scholars and/or practitioners and, together, form a world-class set, with the ability to deliver an exceptionally high quality graduate education. To varying degrees (like any group of planning faculty) they excel not only in teaching and mentoring—but also in research and/or professional practice.

Indeed, the dynamism of SUP is that it marshals Washington, DC's rarified professional environment to form a graduate program comprised of faculty who are primarily external to GW.¹ The SUP faculty—all of whom are attached to the program for the long-term and teach either one or two classes annually—hold important positions in government, private sector, and non-profit organizations. (Importantly, given the program's mission, two SUP faculty are lead authors on the 5th [2014] Assessment Report of the Intergovernmental Panel on Climate Change and a third is a reviewer.) Advising responsibilities are broadly distributed across faculty—all of whom have strong ties to academia and are leaders in their respective fields, nationally and/or internationally—giving students the opportunity to learn from different kinds of mentors who work in different areas of the field. The faculty bring to GW extensive professional networks and often serve as conduits to the job market, enabling students to grow into their careers in an organic manner. This framework works, first, because of SUP's location in Washington, DC and, second, because of the organizational structure shown in Figure 1. These two features are what make the SUP paradigm so powerful.

CRITERIA:

- A. Faculty quality: The faculty of the Program shall be appropriately qualified to serve the Program's mission and shall be capable of executing the Program's goals and objectives, particularly as they pertain to teaching, research, and service. The Program shall employ faculty with the focus, commitment, teaching ability, and qualifications in planning sufficient to prepare graduates to enter professional planning practice in diverse occupational and institutional settings.

GUIDELINES

1. The faculty will include a mixture of individuals with backgrounds in planning scholarship and planning practice.
2. Regular, full-time faculty members have educational and professional backgrounds appropriate for the program level, with a relevant mix of credentials (i.e., accredited degrees in planning, significant experience in planning, PhDs in planning, degrees and experience in related fields, and AICP membership).
3. Regular, full-time faculty members have the educational background and competencies to teach core courses and an area of specialization (if offered by the Program), and to carry out the major share of teaching, research, and service based on the mission and goals.

¹ Two SUP faculty also hold appointments in other colleges at GW, Business and Engineering.

4. Adjuncts, lecturers, and guest speakers include individuals with the professional involvement and status to effectively add perspectives from the planning practice and other related specialties.
 5. Adjunct faculty members should complement the teaching competencies of the full-time faculty based on educational and professional backgrounds, experience in the planning field, and AICP membership.
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The SUP faculty—all of whom are attached to the program for the long-term and teach either one or two classes annually—hold important positions in government, private sector, and non-profit organizations. Their CVs are provided in Appendix IVA. (Importantly, given the program’s mission, two SUP faculty are lead authors on the 5th [2014] Assessment Report of the Intergovernmental Panel on Climate Change and a third is a reviewer. One faculty member is the Vice President for Research at the US Green Building Council). Advising responsibilities are broadly distributed across faculty—all of whom have strong ties to academia and are leaders in their respective fields, nationally and/or internationally—giving students the opportunity to learn from different kinds of mentors who work in different areas of the field. The faculty bring to GW extensive professional networks and often serve as conduits to the job market, enabling students to grow into their careers in an organic manner. Faculty hold a variety of professional credentials including, but not limited to, AICP, LEED, and GISP.

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- B. **Faculty diversity:** The Program shall foster a climate of inclusivity that appreciates and celebrates cultural differences through its recruitment and retention of faculty members. Faculty shall possess, in the aggregate, characteristics of diversity (e.g., racial and ethnic background) that reflect the practice settings where graduates work or where professional needs exist in the Program’s region of recruitment and placement. Notwithstanding, the demographic mix is not a static concept, and all planning programs should seek to be in the forefront of a diverse society.

GUIDELINES

1. Full-time faculty members demonstrate diversity with respect to age, race, ethnicity, gender, and state or country of origin.
 2. Full-time faculty members demonstrate diversity through their degrees being earned from a variety of universities, ability to conduct research in a variety of ways, and range of specialized knowledge covering program content.
 3. Policies and procedures are in place and followed to further equal employment opportunities.
 4. Adjuncts, lecturers, and guest speakers enhance the diversity of expertise, professional experiences, race/ethnicity, and gender.
 5. Programs collect data which makes tracking of diversity issues in faculty recruitment and retention possible.
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The faculty hold a variety of advanced degrees in either planning or in fields that are directly connected to the field and thus hold the comprehensive set of expertise required to deliver SUP curriculum. As detailed in Part II, the degrees held by the faculty include master’s and Ph.D.’s in agricultural economics, geography, geology, international development, public administration,

and, of course, planning itself. This range of degrees manifests in a spectrum of employment within the government, private sector, and non-profit organizations—all top-line positions. In addition to the disparate scholarship and vocational backgrounds, the SUP faculty are also diverse with respect to age, gender, race, and countries of origin. SUP has in place policies targeting continued diversity and equal opportunities among the faculty. Every faculty member is a member of the Service Employees International Union (SEIU) Local 500, which is the Coalition of Academic Labor in Maryland and Washington, DC, and advocates for equal employment opportunities and employee rights independently of the employer, George Washington University.

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- C. Faculty size: The faculty shall be of a sufficient size to accomplish the Program’s mission and goals, administer the program, and teach the curriculum. The Program shall have a faculty of such size that the full-time faculty are able to teach the core curriculum and direct all areas of specialization.

GUIDELINES

1. As a general rule, the Program should have a minimum of 5 full-time or equivalent of 5 full-time faculty members.
 2. As a general rule, the Program should have no greater than a 15/1 ratio of undergraduate student FTE to instructional faculty FTE, and a 10/1 ratio of graduate student FTE to instructional faculty FTE.
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The overall size of the faculty is sufficient to accomplish the Program’s mission and goals, administer the program, and teach the curriculum. As presented in Section II under faculty, the program presently has an estimated ratio of 9.4 graduate student FTE to instructional faculty FTE. A detailed breakdown of every course ever offered by SUP in the main is provided in Appendix IVC 4-A. The bottommost tabulations show that the mean class size across all courses is 10.1 students; when classroom classes only (that is, setting aside the self-paced capstone practicum, and independent study courses—the mean class size is 10.51 students.

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- D. Engagement with students: The faculty shall be engaged with students beyond the classroom as mentors, advisors, and/or committee members or committee chairs on thesis, reports and dissertations. Faculty shall provide career advice and assist in job placement in ways that coordinate appropriately with the efforts of staff and academic professionals.

GUIDELINES

1. Faculty members work directly with students on projects and research outside of classroom time.
 2. Faculty members advise students beyond or in place of professional staff in a student’s course of study.
 3. Faculty members participate as committee chairs or members in individual student work.
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The SUP Director engages not only in an administrative capacity, but as a collaborator among faculty, students, and alumni—all of whom contribute to making the program what it is. Faculty meet regularly and the students and alumni, who are organized respectively via an elected government and an appointed board, have seats at those meetings. Beyond this ability to meet with the SUP director and faculty regarding broader student needs, faculty are engaged with students as informal mentors and advisors. The SUP organizational structure advising responsibilities are broadly distributed across faculty—all of whom have strong ties to academia and are leaders in their respective fields, nationally and/or internationally—giving students the opportunity to learn from different kinds of mentors who work in different areas of planning. The faculty bring to GW extensive professional networks and often serve as conduits to the job market, enabling students to grow into their careers in an organic manner. This is particularly helpful to SUP students as they seek a variety of professional employment options. Furthermore, the ability to engage with faculty, who are also active professionals in their field and therefore not professionally engaged exclusively with the University, is a unique advantage. Students have reported that the ability to speak directly with actively engaged professionals within the field of planning has been beneficial in both understanding the range of positions to which planners are drawn as well as the varying career trajectories that are possible with a planning master’s degree.

Faculty members have been involved in several professional capacities, or committees, that further engage student’s course of study as well.

- A faculty member, who is a resident of Maryland, joined the National Capital Area Chapter of the APA (in addition to the Maryland Chapter) in order to represent SUP within the local chapter of the APA. In this capacity, SUP has both an AICP-planner faculty representative with APA and also appoints a student representative to the local chapter.
- The SUP director has served as a liaison between the World Bank and George Washington University. From this role, the director has been able to perennially provide students with the opportunity to work at the annual conference on land and poverty. The partnership for this conference began in 2012 with the World Bank hiring students to assist in the conference as registration assistants and room mentors. Beginning in 2015, SUP students additionally served as World Bank contractors with a record of employment with the World Bank in the form of an executed contract.
- SUP students have been engaged in research outside of the classroom for which faculty have assisted in time and efforts. One student, who has received a master’s degree through SUP, published and delivered a research paper in Ottawa, Canada with the work of SUP faculty.

E. Research and scholarship: Faculty will engage in research, scholarship, and/or outreach reflective of the stage of their careers and the mission and expectations of the University.

GUIDELINES

1. Faculty produce theoretical and/or applied research and scholarship relevant to the profession and disseminated through appropriate journals or other publications.
2. Faculty teaching and administrative assignments allow sufficient opportunity to pursue research and scholarly achievements.
3. Faculty scholarly activities are reviewed and recognized by faculty peers.

4. Faculty participate in conferences and other venues as outlets for their research efforts.
-

Research is the engine of knowledge creation, and the scientific method is responsible for centuries of human progress. Planners need to rely on objective research whenever possible and be not only consumers of knowledge—but, also, producers of knowledge. To the extent that expectations for faculty research production is requisite, SUP faculty pursue research within their home organizations and teaching assignments are not held in accordance with compensatory time allotments for independent research. Within this framework, however, faculty are encouraged to both produce independent research and participate in conferences to showcase their research as well as stay in touch with scholarly achievements produced within the planning field. A recent (2016) article published in *Growth and Change*, a leading planning journal, ranks the current SUP program director among the top 25 most productive scholars of regional science—an interdisciplinary field that includes urban planners, economists, geographers, engineers, and others—globally, and in the top 10 within the United States. (The paper is contained in Appendix IVC 3-A director’s complete CV is contained in Appendix IVC 3-B.) As the Table 3.E. depicts below, all SUP faculty are research-productive in terms of basic research, applied research, and professional research.

TABLE 3.E. 7-YEAR SUMMARY OF FACULTY SCHOLARSHIP

Faculty Name	Job Title	Number of books Authored or Edited	Number of Refereed Journal Articles	Number of Book Chapters Authored	Number of Extramural Exhibitions	Number of Extramural Awards and Honors	Number of Reports and Monographs	Number of External Contracts and Grants	Dollar Amount of External Contracts and Grants	Number of Extramural Presentations at Conferences
Full-time in Planning Unit (A)										
N/a										
Part-time in Planning Unit (B)										
N/a										
Adjunct/Contract/Non-tenure track (C)										
Andrew Bernish	Associate Planner, Ayers Saint Gross					3				8
Anthony G. Bigio	Urban Advisor – Urbanization and Resilience Management Unit, World Bank (Retired)		10							
John I. Carruthers	Director, Sustainable Urban Planning Program, College of Professional Studies, The George Washington University	5	11	6		3	2	6	~\$160,000	11
Rachael Grace Jonassen	Professional Independent Consultant	3	5			5	15	11		13
Mesbah J. Motamed	Research Agricultural Economist, Economic Research Service – U.S. Department of Agriculture Economic Consultant, Global Livestock Consortium for Research Support Program		11							6

Faculty Name	Job Title	Number of books Authored or Edited	Number of Refereed Journal Articles	Number of Book Chapters Authored	Number of Extramural Exhibitions	Number of Extramural Awards and Honors	Number of Reports and Monographs	Number of External Contracts and Grants	Dollar Amount of External Contracts and Grants	Number of Extramural Presentations at Conferences
Adjunct/Contract/Non-tenure track (C)										
Christopher R. Pyke	Vice President for Research, US Green Building Council CEO of the Global Real Estate Sustainability Benchmark		22			9		2	\$4.5 million	
Scott Sklar	Founder and President, The Stella Group, LTD	2	1							
John V. Thomas	Director, Community Assistance & Research Division, Office of Sustainable Communities, U.S. EPA		4			2				9
Sandra F. Whitehead	Director of Program and Partnership Development, National Environmental Health Association		7							

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- F. Professional involvement and community outreach: Faculty shall be continuously engaged in activities leading to their professional growth and advancement, the advancement of the profession, and progress toward meeting the needs of the broader community.

GUIDELINES

1. Faculty participate in university and professional services.
2. Faculty participate in service to the profession through research and outreach efforts and in support of student activities related to the profession.
3. Faculty demonstrate activity in the profession through participation in national organizations and/or participation in local, state, regional, and national professional conferences, workshops and other sponsored activities including activities of professional planning organizations.
4. Faculty serve the continuing education needs for members of the profession.

Because all SUP faculty—including the director—are active professionals employed within the field of planning, involvement within the professional arena of planning is continuous and immersive. As faculty are not beholden to university services exclusively, faculty members actively engage with neighborhoods, clients, services, and organizations through their professional networks beyond the scope of an academic framework. As depicted in Table 3.F., the faculty participate in a gamut of professional planning services. To name but a few examples, SUP faculty serve as advisors to (or authors for) the Intergovernmental Panel on Climate Change; the World Bank; the U.S. Department of Energy, major international development organizations, including the Global Green Growth Institute and Korea Development Institute; the U.S. Department of Energy; the U.S. Domestic Policy Council; and more.

TABLE 3.F. 7-YEAR SUMMARY OF FACULTY PROFESSIONAL INVOLVEMENT

Faculty Name	Job Title	<i>Number of Plans, Design, and Policy Reports Submitted to External Clients</i>	<i>Number of Extramural Presentations to Agencies, Firms, Universities, and Other Clients</i>	<i>Number of Offices Held and Leadership Positions in Professional Associations and Learned Societies</i>	<i>Number of Offices Held and Memberships on Government or Corporate Boards and Commissions</i>	<i>Number of Editorships and Memberships on Editorial Boards</i>
Full-time in Planning Unit (A)						
<i>N/a</i>						
Part-time in Planning Unit (B)						
<i>N/a</i>						
Adjunct/Contract/Non-tenure track (C)						
Andrew Bernish	Associate Planner, Ayers Saint Gross	7	6	3		
Anthony G. Bigio	Urban Advisor – Urbanization and Resilience Management Unit, World Bank (Retired)	2	3	3	4	1
John I. Carruthers	Director, Sustainable Urban Planning Program, College of Professional Studies, The George Washington University		4	1		6
Rachael Grace Jonassen	Professional Independent Consultant	7		15	2	2
Mesbah J. Motamed	Research Agricultural Economist, Economic Research Service – U.S. Department of Agriculture Economic Consultant, Global Livestock Consortium for Research Support Program					
Christopher R. Pyke	Vice President for Research, US Green Building Council COO, GRESB.com			13		
Scott Sklar	Founder and President, The Stella Group, LTD		1	3	2	

	Job Title	<i>Number of Plans, Design, and Policy Reports Submitted to External Clients</i>	<i>Number of Extramural Presentations to Agencies, Firms, Universities, and Other Clients</i>	<i>Number of Offices Held and Leadership Positions in Professional Associations and Learned Societies</i>	<i>Number of Offices Held and Memberships on Government or Corporate Boards and Commissions</i>	<i>Number of Editorships and Memberships on Editorial Boards</i>
Adjunct/Contract/Non-tenure track (C)						
John V. Thomas	Director, Community Assistance & Research Division, Office of Sustainable Communities, U.S. EPA				6	
Sandra F. Whitehead	Director of Program and Partnership Development, National Environmental Health Association					

G. Professional development: Faculty assignments and opportunities shall be such that skills in teaching, research, and other creative activities are sufficiently maintained and developed.

GUIDELINES

1. Assignment of duties shall recognize the need for activities that build human capital, such as research, engagement, outreach, and professional leadership.
 2. Appropriate mechanisms, such as release time from teaching and sabbaticals, shall exist to enable significant research projects.
 3. Adequate resources shall be available to support faculty professional development.
-

As faculty positions are not tenured within GW's College of Professional Studies, professional development activities are often pursued by the faculty outside the scope of their faculty appointments. However, the College of Professional Studies at GW does recognize the importance for professional leadership and outreach among faculty. Thus, in order to support and maintain professional development and creative activities to the fullest extent possible, SUP is able to offer monetary resources to maintain certain professional credentials (e.g., AICP, GISP), to attend conferences, and to act as a conduit for publishing and sharing faculty research and faculty-led research reviews. Moreover, as detailed under Standard #5, Governance, CPS has an Associate Dean for Learning and Faculty Development who is responsible for a wide array of duties that strengthen SUP's (and CPS's) faculty. Here it is worth noting that the associate dean is highly operational and, as such, is directly engaged in day-to-day program operations. Without being intrusive—that is, overly prescriptive—the associate dean performs a number of duties not commonly available to academic units, including but not limited to:

- Curricular oversight of all programs and courses for pedagogical soundness and consistency;
- Review of all program and course learning outcomes for accreditation purposes;
- Training and support of all faculty for teaching effectiveness;
- Creation and delivery of pedagogical materials and workshops to support faculty development;
- Creation of online programs and courses, working closely with Program Directors and faculty and supported by a staff of instructional designers and videographers;
- Advising faculty confronting instructional and student problems, including academic integrity violations;
- Review of all full-time faculty University annual reports; and
- Representing CPS in University committees on teaching and learning issues, including online education.

These and other activities serve to strengthen SUP's pedagogy and enhance the performance of the program across the board.

STANDARD #4 – CURRICULUM AND INSTRUCTION

Planners integrate knowledge, skills and values to anticipate the future and improve the quality of decision-making affecting people and places. They understand the dynamics of cities, suburbs, regions, and the theory and practice of planning. They attend to the diversity of individual and community values. They develop and implement ethical plans, policies and processes. The minimum curriculum criteria below reflect these educational goals.

The curriculum should demonstrate consistency and coherence in meeting the Program’s mission, goals and objectives. While an accredited degree Program must meet basic minimal performance criteria, the PAB recognizes that programs may have different profiles with varying emphases. The Program being reviewed must demonstrate how its curricular content matches the profile emphasized in its overall mission. For example, a Program emphasizing urban design would meet a different test than one emphasizing small town and rural planning.

The Program shall provide a curriculum and offer instruction to best assure achievement of the knowledge, skills, and values that qualify graduates of accredited degree programs to enter professional planning practice. While Programs may adopt such established and familiar learning activities as courses and internships, the PAB is also receptive to program innovations that prove effective in meeting the criteria.

An accredited degree Program must ensure that each graduate demonstrate the knowledge, skills, and values necessary for competent professional planning in diverse occupational and institutional settings; such evidence will be provided in Standard 6. The criteria below provide a framework for judging the scope and quality of minimum educational outcomes.

The SUP curriculum has been developed, implemented, and refined with careful attention to both PAB standards and the demands of the Washington, DC job market. (As detailed in the strategic plan, SUP aims to be national and international in scope.) The curriculum was created based on PAB requirements and, since the program’s launch in fall 2011, it has been implemented and refined according to the needs of the student body and the job market. One feature that distinguishes SUP is its strong orientation toward neoclassical economics and research focused on forming evidence-based policy. These skills were identified in a recent market analysis commissioned by CPS in spring 2015—as part of the strategic planning process and in preparation for this SSR—as being in high demand within the policy-rich Washington, DC region. This market analysis, conducted by an independent research firm is contained in Appendix IVC 6-A. Page 14 presents two charts entitled “Top Skills for Individuals with Urban Planning Skills.” The first of these, for the Washington, DC region, ranks economics first while the second of these, for the nation, ranks land use first. In addition, SUPSO, the SUP student government regularly conducts its own independent evaluation of the SUP curriculum, known as the SUPSO student engagement survey. The results of that survey—which was developed and issued by SUPSO, with no faculty involvement—for the 2012 - 2013, 2013 - 2014, and 2014 - 2015 academic years are provided unedited in Appendix IVC 7-A. (SUPSO did not conduct a survey for the 2015 - 2016 academic year.) So, the SUP curriculum has been attuned to PAB standards; SUP’s specific mission; independent student input; and the demands of the labor market in which it resides.

Recall that the mission of SUP is to train the next generation of leaders in the field of urban planning. Specifically, SUP makes the triple bottom line of economic, social, and environmental sustainability the focus of urban planning in order to achieve competitive, inclusive, and ecological cities. The program meets its objectives by graduating practitioners who work in sustainable development, both nationally and internationally. In doing so, SUP aims to significantly expand the reach of the planning profession by placing its students and alumni in positions traditionally dominated by practitioners of the natural and social sciences. Above all, SUP seeks to be known for its primacy in climate change adaptation and mitigation—by training planners to address the consequences of global warming. The impact of SUP is measured by its success in elevating the field of urban planning as a force for addressing the problems that humanity must face in the oncoming future of anthropogenic climate change. Thus, the SUP curriculum is designed to meet this mission and deliver skills that rewarded within the regional context of GW.

From a pedagogical vantage, SUP addresses everything expected of an urban planning program—with the added dimension of sustainability, which runs through the program from start to finish. This emphasis on sustainability is achieved by taking the field of urban planning and casting it through the nexus of a lens proportioned on the triple bottom line of economic, social, and environmental sustainability. In this way, all of planning—whether for climate change, development, transportation, or anything else—is studied from the three perspectives. This is a rich pedagogy that is qualitatively different from other planning programs. The role of SUP is to keep the field trained on the nexus, so that a graduate working primarily in, say, the environmental arena retains an appreciation for the economic and social arenas—and so on. The definition of sustainable urban planning does not drift, even as individuals pursue different manifestations of it.

The MPS requires that students complete 48 credits: a core of 32 credits, or 12 courses, plus a 12-credit concentration in either Climate Change Management and Policy or Sustainable Landscapes; a third concentration (shown here for expository purposes ONLY: the concentration has not been approved and is not yet an option) in Sustainable Urbanization in Asia is under development. The SUP course catalogue, as set out in the Curriculum Map in Part II is as follows:

CORE

PSUS 6201 – Principles of Sustainable Urban Planning (F)
PSUS 6202 – Urban and Environmental Economics (F)
PSUS 6203 – Research Methods I (F)
PSUS 6204 – Legal Frameworks (S)
PSUS 6210 – Transportation Planning in City Systems (S)
PSUS 6211 – Regional Development and Agricultural Economics (S)
PSUS 6212 – Sustainable Communities I (F)
PSUS 6220 – Planning Resilient and Low-Carbon Cities (S)
PSUS 6221 – The Scientific Basis for Climate Change (S)
PSUS 6223 – Sustainable Communities II (S)
PSUS 6230 – Studio in Sustainable Urban Planning (F)
PSUS 6233 – Capstone (F/S/Summer)

CONCENTRATIONS

Climate Change Management and Policy – 12 credits

PSUS 6222 – Sustainable Building: Energy Demand, Efficiency, and Supply (F)
PSUS 6224 – Sustainable Energy for Cities and the Environment (F)
PSUS 6225 – Climate Change Economics (F)
PSUS 62XX – elective

Sustainable Landscapes – 12 credits

PSUS 6260 – Introduction to Sustainable Design (2 credits)
PSUS 6261 – Ecology of the Built Environment (2 credits)
PSUS 6262 – Tools for Sustainable Design (2 credits)
PSUS 6266 – Ecological Restoration (1 credit)
PSUS 6268 – Sustenance and the Landscape (2 credits)
PSUS 62XX – elective (3 credits)

Sustainable Urbanization in Asia – 12 credits (IN DEVELOPMENT - NOT APPROVED)

PSUS 6214 – Megacities (CREATE: 3 credits)
PSUS 6215 – International Development (CREATE 3 credits)
PSUS 6224 – Sustainable Energy for Cities and the Environment (3 credits)
PSUS 6260 – Introduction to Sustainable Design (2 credits)
PSUS 6266 – Ecological Restoration (1 credit)
PSUS 62XX – elective (3 credits)

6224 or
6260 & 6266

Existing Elective Courses

PSUS 6213 – Research Methods II: Advanced Geospatial and Econometric Analysis (S/Summer)
PSUS 6235 – Advanced Topics (Summer) (Food and Cities, 2016)
PSUS 6235 – Korea Studio (S, in even-numbered years)
PSUS 6231 – Practicum (F/S/Summer)
PSUS 6264 – Native Plants

Note that each of the courses has a designated semester, which is when it is to be run each year. Note, too, that, for the sake of consistency, the courses are listed with their current course numbers and titles, which have evolved and been modified somewhat since 2014. Certain courses (like 6214 Megacities) still need to be created and approved, as part of the process of developing the new concentration; likewise, 6225, Climate Change Economics, is also a new course (that has not yet been offered) but is being submitted for approval as part of the process of reconfiguring the two existing concentrations to make room for the third. In short, the course listing is the very latest snapshot of SUP, so, in certain cases, pieces of it are in the process of being reconfigured according to SUP's strategic plan.

Like every academic unit, SUP is sometimes forced to not run a certain class, or classes, in a given semester in the case of anemic demand. And, in the past, courses have been run during semesters (fall vs. spring vs. summer) different from which they are currently tracked. The intention is that ALL required SUP courses run over a given academic year—that, is between the fall and spring semesters—during the appointed semester and only elective classes (under the banner of PSUS 6235) run during the summer, in order to avoid depleting demand for required courses during the academic year. This tracking gives predictability to both students and SUP faculty, who often plan their workflow at / travel for their home institutions around their teaching schedules. Note that the capstone and practicum courses are available year-round and, in principle so are student-specific independent studies. Moreover, SUP students may take courses around the GW campus and substitute these—at the discretion of the program director—for a particular required course. For example, students have recently gone outside SUP to take courses in criminology, public policy, and sociology that meet their specific needs.

Appendix IVC 4-A lists each SUP course run since the program opened in fall 2011 including the semester it was offered, the number of students enrolled, the mean grade received, the ratio of women to men, and the number of students in the course whom were from one of the two certificate programs, outside of SUP, and in non-degree status. Summary statistics are also given for each course and totals are provide in the two tables at the bottom of the set. Note that the set of tables does not include courses in the sustainable landscapes concentration, which are cross-listed with their home program, GW’s MPS in Landscape Design. SUP does have ownership over these courses, however, so has the ability to run them on its own in order to meet student demand, if need be—but, to date, that has not been necessary. All data compiled in these tables is derived from raw statistics provided by GW’s Office of Institutional Research Planning.

Finally, with respect to the curriculum, key way in which SUP measures the success of its mission is by placing its students and alumni in positions traditionally dominated by practitioners of the natural and social sciences. Graduates of the MPS program are identified in Part II and Appendix IVC 2-A. These same individuals—plus their colleagues in the two certificate programs—are listed in the Table contained in Appendix IVC 2-B, which shows the positions they occupied as of May 2016, when the census was conducted. Although not all SUP alumni choose to become planners (for example, one person returned to accounting, which she had a long career in before entering SUP) this list demonstrates that, in just a few short years, SUP has made strong progress toward its mission. Overall, the program—and its curriculum—have achieved an outstanding record of success in preparing its graduates for the job market.

CRITERIA:

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- A. Required knowledge, skills and values of the profession: The Program shall offer a curriculum that teaches students the essential knowledge, skills, and values central to the planning profession. These required components will be taught in such a manner that it is possible to demonstrate that every graduate has studied them. Ordinarily, this means that they are included in core courses required of all students, although other approaches are possible. Specifically:
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Within this entire section - Required knowledge, skills and values of the profession - under each criterion, the course narrative notates whether the topic addressed is “familiarized” or “mastered” within the course. Often the topics addressed in this section are woven into multiple courses offered within SUP’s curriculum. Therefore, the delineation of “familiarized” and “mastered” depicts the classes in which the topic is most predominant. Those classes for which the criterion is “familiarized” address the topic and provide students with an understanding of the main tenants of the criterion beyond a mere introduction. Whereas “mastered” denotes those classes that provide a deeper understanding and serve as vanguard courses within the SUP curriculum for each topic. Providing these delineations for each course proved instructive for the faculty completing each section to more clearly recognize how their course(s) fit within the entire SUP curriculum.

A.1. General planning knowledge: The comprehension, representation, and use of ideas and information in the planning field, including appropriate perspectives from history, social science, and the design professions

General planning knowledge is disseminated in various means throughout many of the courses within the SUP curriculum. Depicted herein within section A.1. are the courses that most thoroughly immerse general planning knowledge.

a) Purpose and Meaning of Planning: appreciation of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expected to have.

- **PSUS 6201 Principles of Sustainable Urban Planning** [Mastered]: This course, offered perennially in the fall semester, has been taught by a certified practicing planner who has worked professionally in the private, public, and international settings. The course emphasizes the role of, and need for, planning through the lens of historical paradigms (e.g., zoning establishment and evolution, urban renewal, urban sprawl, etc.) and the impact that planning can have on different environments both domestically and internationally. In addition to providing a fundamental grounding in planning history, the course also examines current planning through weekly student presentations of urban planning news as well as the future direction of planning through targeted discussions of the need for continued planning in terms of climate change, sustainability, and economic development.
- **PSUS 6204 Legal Frameworks** [Mastered]: The legal frameworks course examines legal case studies and best practices to understand the history, fundamentals, and meaning of land use planning and why it is undertaken by various entities. In so doing, the course examines a range of legal, environmental, economic, public health, transportation, and energy issues that have shaped the planning framework through various stages and paradigms within urban and regional planning's history. Armed with the course material throughout the semester, students prepare a final report and presentation that is incorporative of the lessons learned from best practices in the past and apply these toward future planning.
- **PSUS 6211 Regional Development and Agricultural Economics** [Familiarized]: This course uses economics to explore sustainable urban planning and land use challenges faced by least developed countries (LDCs). This course provides a national and international perspective on the meaning of planning and thus augments the SUP curriculum by expanding the meaning of planning to countries with challenges posed above and beyond what many cities, counties, and regions face in developed nations like the United States. The course explores practical solutions involving planning, urban development and environmental management that can be undertaken by LDCs to mitigate vulnerabilities incurred from entrenched poverty and climate change.
- **PSUS 6212 Sustainable Communities I** [Familiarized]: Sustainable Communities I examines the role, purpose, and meaning of planning with a detailed emphasis on the triple bottom line of sustainability (environmental, economic, and social). The course addresses the meaning of planning within community development with special attention given to the policy arena and the various sectors of interest that impact contemporary urbanization. The key sectors that

planning impacts and affects including buildings, neighborhoods, transportation systems, energy, air quality, greenhouse gas emissions, water quality, water supply, wastewater management, and food systems are all discussed over the course of the semester.

- **PSUS 6220 Planning Resilient and Low-Carbon Cities** [Familiarized]: This course looks at the importance and impact of planning from, primarily, an environmental perspective. City case studies and urban climate action plans from a variety of developmental and policy contexts are reviewed in the class. Students gain an appreciation for the importance and impact of planning for its environmental impact and sustainable development challenges that matter locally. Case studies and histories examine efforts to provide sustainable environmental plans in different parts of the globe over the past quarter century.
- **PSUS 6223 Sustainable Communities II** [Familiarized]: The Sustainable Cities II course provides students with an appreciation for the role that planning plays from an outsider's perspective. That is, students gain an appreciation for how other entities rely upon and use the work of planners. Various rating systems for sustainable neighborhoods (e.g., LEED ND, STAR) are measured and debated along with rating systems for buildings, urban design, and economic growth. In this way, the impact that planning can be expected to have is becoming more objective and the merits of such assessments are gauged through class readings, exercises, and presentations.
- **PSUS 6235 Food and Cities** [Familiarized]: This course delves into the purposes of planning from a policy standpoint with an emphasis on food production (with closely-related aspects of agricultural, nutrition, trade, etc.). The course examines both the history and current policy regarding urbanization, city growth, and public health and how food and food systems should be woven into effective planning policies.

b) **Planning Theory: appreciation of the behaviors and structures available to bring about sound planning outcomes.**

- **PSUS 6201 Principles of Sustainable Urban Planning** [Mastered]: This course weaves different planning theories, and their historical context, throughout its entirety. Although the reading assignments change perennially, the tenets of planning theory from the late 19th century through to the present are examined to appreciate the context of current planning as well as to gain a fuller understanding of the shortcomings that the field of planning has caused. Thus, the students are equipped with a rich contextual appreciation of beliefs and tools that have been historically wrought by planners working within the profession.
- **PSUS 6204 Legal Frameworks** [Mastered]: PSUS 6204 examines planning theories as the result of legal cases and policy results. The course deals heavily with aspects such as zoning, growth management policies, and development incentives utilized historically to affect land use and alter planning outcomes. From an examination of legal case studies and environmental policy issues, the course presents obstacles and adaptations created through various planning theories. Students are required to participate in class debates focused on various planning theories.

- **PSUS 6210 Sustainable Transportation Systems** [Familiarized]: This class examines planning theories and how they play a role in bringing about sustainable transportation systems. This course invests heavily in the planner's role in enabling these systems to be sustainable as opposed to a technological role. Therefore, the course helps students identify what brings about sound planning outcomes for sustainable transportation from the processes planners play with developers, architects, civil engineers, state agency staff, local planning commissions, local elected officials, and citizens involved in the process at a local level.
- **PSUS 6211 Regional Development and Agricultural Economics** [Familiarized]: This course delves into effective planning and land use theories and principles that can be applied within a national and international context. Specifically, PSUS 6211 relates economic planning theories to the development and implementation of practical solutions for climate change adaptation and poverty mitigation. The interrelation between subfields that comprise development economics (e.g., world food systems, urban economics, climate change) are explored in detail and solutions that can bring sound planning results are applied and scrutinized.
- **PSUS 6212 Sustainable Communities I** [Familiarized]: PSUS 6212 addresses community development with special attention given to the policy arena and various sectors of interest that impact contemporary urbanization. Planning outcomes that further sustainability from an economic, environmental, and societal framework are emphasized. Specifically, the role of sustainability in planning for economic development, fiscal health, and job creation is scrutinized.
- **PSUS 6213 Advanced Research Methods** [Familiarized]: In this course, students examine the application of advanced research methods to the field of sustainable urban and regional planning. Specifically, students examine how econometrics and geospatial analysis can help bring about sound planning outcomes.
- **PSUS 6222 Sustainable Building: Energy Demand, Efficiency, Supply** [Familiarized]: PSUS 6222 provides students with an appreciation of the importance of providing for and recommending energy-efficient elements wherever possible into building designs. Planning for energy efficiency in built environments represents an important tool in a planners' tool belt and this course provides students with the knowledge to incorporate energy efficient building practices into sound planning.
- **PSUS 6224 Sustainable Energy for Cities and the Environment** [Familiarized]: PSUS 6224 deals with renewable energy and cities' ability to generate their own power. Awareness of renewable energy sources is invaluable to sustainable planning outcomes as more planning jurisdictions seek to provide jobs within renewables and mitigate reliance on limited natural resources. Students examine past practices in which jurisdictions have been exclusively reliant on external energy sources and how such practices are causing increasing vulnerabilities in the face of rising costs, increasing unreliability, and global climate change with associated extreme weather conditions.
- **PSUS 6235 Food and Cities** [Familiarized]: In many urban areas, effective planning needs to consider food, food policy, agriculture, and nutrition. Many cities rely on the economic engines of companies producing and trading in food and nutrition and also deal with such aspects as

food deserts. A thorough understanding of the relationship between food and food production and urban landscape is a vital element for sound planning outcomes.

- PSUS 6260 Introduction to Sustainable Design [Familiarized]: The Introduction to Sustainable Design course introduces students to the wide variety of current sustainability concepts and techniques including the six basic principles of sustainable design. Sustainable design and use of natural resources in sustainable ways are increasingly important concepts for planners to employ. This course introduces students to the gamut of ways in which sustainability can be incorporated in different elements of comprehensive planning including urban design, building design, economic development, neighborhood organization, and climate change mitigation.
- PSUS 6261 Ecology of the Built Environment [Familiarized]: This course provides planners with the knowledge to plan for jurisdictions faced with rising sea levels and coastal areas facing climate change near tidal areas. The course focuses on native plant species, ecosystems, and vulnerable areas near areas in which watersheds join and meet tidal estuaries. Topics such as impervious surfaces, stream channelization, and fragmentation of habitats are analyzed with an appreciation for their role within comprehensive town plans and climate change plans focusing on these vulnerable environments.
- PSUS 6262 Tools for Sustainable Design [Familiarized]: PSUS 6262 provides students with an appreciation for the often overlooked aspect of stormwater management in urban design. This course presents students with an array of best management practices for stormwater management on small-scale sites, parks, commercial, and residential sites. Students are instructed on tasks ranging from developing a water budget for a site to understanding storms and the importance of soil structure in drainage. Tools regarding stormwater management onsite are increasingly valuable to planners as they are tasked with being technical experts for local jurisdictions employing sustainable urban design.
- PSUS 6264 Native Plants I [Familiarized]: This course provides students with an appreciation for landscape design elements provided within local plans. Specifically, students gain a detailed understanding of the importance of including and documenting native plants within sustainable landscape design elements for comprehensive plans.
- PSUS 6266 Ecological Restoration [Familiarized]: This class covers ecological restoration with a focus on invasive species and invasive species removal. The impact that planning for ecological restoration and measures implemented to facilitate recovery of an ecosystem are impressed upon students studying sustainable design. Ecological Restoration projects represent a key component within sustainable design and ecological planning.
- PSUS 6268 Sustenance and the Landscape [Mastered]: PSUS 6268 is an Urban Agriculture course that establishes principles, tools, and techniques that are integral to designing and implementing edible/productive sustainable landscapes at the design and planning level. In order to incorporate sustainable landscape design and edible plants into planning formulation, the course addresses how and why edible plants and food systems contribute to the sustainability triple bottom line as an ecological service. Through this course, students become familiar with understanding and designing according to local/regional planning and zoning policies related to food-producing landscapes and urban agriculture.

c) Planning Law: appreciation of the legal and institutional contexts within which planning occurs

- **PSUS 6201 Principles of Sustainable Urban Planning** [Mastered]: An understanding of the contextual role that the law and courts have played throughout planning history is a main theme within this course. Students are introduced to historic court cases involving property rights and zoning through the most recent court cases emphasized by the American Planning Association. A basic legal understanding needed for AICP accreditation is discussed. Within the second-half of this course, students are tasked with presenting a legal portrayal in which two different students “act out” different sides of well-known planning cases. By having students portray different sides of the cases, the students gain a deeper understanding of the perspective of each side of the case and the complexity involved in adjudicating planning law and applying precedent decisions to future planning issues. Applicable constitutional amendments for each planning case are also considered.
- **PSUS 6204 Legal Frameworks** [Mastered]: The legal frameworks course approaches the study of planning history and theory largely through the lens of legal case history. By way of case studies, the course focuses on the intersection of real estate development, land use planning, community and economic development, and public policy. The ability to read and interpret U.S. case law is taught early within this course and a multitude of planning-related case studies are analyzed and debated within the course.

d) Human Settlements and History of Planning: understanding of the growth and development of places over time and across space

- **PSUS 6201 Principles of Sustainable Urban Planning** [Mastered]: The origination of planning as a professional and academic field is discussed within this course and paired with an appreciation for planning’s history provided during latter weeks in the course. The notion that modern-day planning is, in many ways, an amalgamation of previous planning theories and efforts is investigated through the resurgence and adaptation of earlier planning tenants applied to modern civilizations. Historical development patterns tied to industrialization, environmentalism, and economics are discussed both domestically and internationally through classroom readings and discussion. Students are grounded with a history of major planning theories and the major players who have shaped different historical paradigms within the field.
- **PSUS 6202 Urban and Environmental Economics** [Mastered]: PSUS 6202 is primarily concerned with the applicability of neoclassical economics to the field of urban planning and regional science. The course evaluates the geospatial formation of urban areas and population clusters across time with regard to market forces such as supply and demand, consumption and production, markets and market failure, and measurements of environmental and other ‘non-market’ commodities. Students in the course develop a set of principles and methods that form the core of a powerful way of understanding urban growth. Readings delve heavily into development of places through the lens of economics.
- **PSUS 6204 Legal Frameworks** [Mastered]: PSUS 6204 examines the history of land use planning and growth management systems by examining, in depth, legal case studies and best practices.

Such a historical framework is examined both in course readings and in class through active participation in which students are required to consider both sides of competing perspectives on land use and growth management topics. Students debate such topics as the efficacy of property taxes for development, zoning for social equality, and gentrification for economic development.

- **PSUS 6210 Sustainable Transportation Systems** [Mastered]: Growth and development over time and across space have been indelibly impacted from transportation systems. Cities and urban areas can often trace their initial footprint, as well as subsequent geographic growth, to the most dominant form of transportation present within their core. Older cities dominated by pedestrians have unmistakable cores that differ from later cities developed by mass transit and more modern cities developed around the automobile. This course examines the role that transportation systems have played in the growth and development of cities and urban areas with a special emphasis on examining what makes certain transportation systems sustainable and, therefore, what helps urban areas themselves remain sustainable.
- **PSUS 6211 Regional Development and Agricultural Economics** [Familiarized]: This course explores the growth (or lack thereof) within least developed countries (LDCs) with an appreciation for the economic underpinnings for urban land use and development. The interdisciplinary fields of growth economics, public and welfare economics, and agricultural economics are examined within national and international contexts to evaluate historical patterns of development in LDCs including density gradients, lax regulatory restrictions, environmental degradation, overcrowding, and illegal settlements. The course provides an appreciation for the history of development in areas of the world in which development has often not had the benefit of formal planning.
- **PSUS 6223 Sustainable Communities II** [Mastered]: One of the key objectives of the Sustainable Communities II course is for students to gain an appreciation for the fundamental drivers of urban form. Thus the growth and development of certain places over time is scrutinized alongside mechanisms for understanding and characterizing urban form. Theories such as market transformation and diffusion of innovation are discussed as drivers to urban growth and development. In conjunction to these theories, urban land use optimization is measured through urban simulation models employed to gauge future urban growth, development, and change.
- **PSUS 6235 Food and Cities** [Familiarized]: This course examines the history of food and food production and the role that it has played, and continues to play, in shaping the urban landscape. In this course, students gain a deeper appreciation of the roles that food plays in the lives of inhabitants, how it potentially shapes the urban landscape, and the role of cities in determining the geography, sustainability, and business of agriculture.

e) The Future: understanding of the relationships between past, present, and future in planning domains, as well as the potential for methods of design, analysis, and intervention to influence the future

- **PSUS 6201 Principles of Sustainable Urban Planning** [Mastered]: The relationship of planning domains to the historical, present, and future are investigated within this course. Specifically,

how historical planning has been shaped and tested by different planning paradigms is emphasized. In addition, the potential of future planning efforts is addressed. For instance, the intersection between urban design and sociological well-being is investigated and the future promotion and implementation of smart growth principles and their impact on environmental quality are addressed. Furthermore, students are encouraged, through research essays supplemented with associated readings, to expand the boundaries of what has historically been considered planning's purview and gain a deeper appreciation of the correlation between planning and related disciplines in politics, economics, and other related domains. Planning's influence in the future will often be made with cooperative inroads forged with other professions. Therefore, this course encourages students to use planning's historical context as a springboard from which the profession can continually expand.

- **PSUS 6202 Urban and Environmental Economics** [Familiarized]: PSUS 6202 concentrates on the application of neoclassical economics to problems faced by practitioners in the field of urban and regional planning. This involves understanding geospatial formation of urban areas and population clusters across time with regard to market forces such as supply and demand, consumption and production, markets and market failure, and measurements of environmental and other 'non-market' commodities. Armed with this understanding, students have a working knowledge of how economic forces have shaped planning domains in the past, present, and future and leave the course with a greater understanding of the potential for economic theory to be applied to influence the future of planning.
- **PSUS 6204 Legal Frameworks** [Familiarized]: The Legal Frameworks course brings a thorough understanding of past land use and growth management decisions to the present and future of planning by examining their role in promoting economic development, social equity, public policy, and environmental considerations. Legal case histories are examined alongside best practices (and failed policies) in order for students to gain an understanding of the role various interventions have played throughout the history of planning and its closely related extensions of zoning and economic development. The topics covered in PSUS 6204 provide students with the ability to apply planning innovations to future housing and transportation systems, community resilience tactics, public health policies, and energy conservation.
- **PSUS 6210 Sustainable Transportation Systems** [Mastered]: This course examines the future of transportation and what enables certain transportation systems to be sustainable. By looking beyond a single category of benefits or impacts, the course teaches students the value of analyzing sustainability in terms of the triple bottom line (economy, environment, society). Specifically regarding transportation, given the long-term nature of some of sustainability's greatest challenges - such as peak oil, global climate change, dramatic demographic shifts, and an aging society – investigating interventions and innovations to be implemented within the arena of transportation is paramount. Past development patterns have often made large-scale change within existing transportation systems difficult, but the course examines how often entrenched systems can be reworked to provide a more sustainable future.
- **PSUS 6211 Regional Development and Agricultural Economics** [Familiarized]: This course examines historical intervention of international development policies, land use, and economics in least developed countries (LDCs). PSUS 6211 applies neoclassical economics to help understand past efforts within international development of LDCs and also examines the

varied and difficult questions that will continually be faced by planners working in the arena of international development. The class examines policy and intervention solutions that can be applied to mitigate climate change, poverty, and development obstacles in LDCs.

- **PSUS 6221 Scientific Basis for Climate Change** [Familiarized]: PSUS 6221 provides students with an in-depth analysis of the methodologies used to assess urban carbon footprints, conduct urban risk assessments, and harness economic valuations of the costs of climate impacts and of the benefits of adaptation and greenhouse gas emission reductions. In so doing, past planning efforts' success (and often failure) in providing environmentally sustainable outcomes are compared with current urban climate action plans and visions for future benchmarks for assessing the potential for planning to influence future environmental policy. In turn, this level of influence is discussed within local, regional, national, and international contexts.
- **PSUS 6222 Sustainable Building: Energy Demand, Efficiency, Supply** [Familiarized]: PSUS 6222 provides students with an appreciation for potential design elements to influence future planning in regards to the design of energy efficient buildings. Students gain an appreciation for past energy policies and building efficiencies and how these have led to an increasing need to retrofit buildings and the built environment in current and future plans. Current and future planning paradigms implementing eco-district and green neighborhoods are also considered.
- **PSUS 6223 Sustainable Communities II** [Mastered]: Historical patterns of planning are juxtaposed with existing and burgeoning technologies used to measure change and analyze future growth potential during the course of this class. Urban simulation and land use optimization tools are introduced to students as means for steering changes in sustainable urban forms. Current approaches to characterizing and transforming neighborhoods and communities are articulated. Future trends in urban and building design are discussed and analyzed.
- **PSUS 6224 Sustainable Energy for Cities and the Environment** [Familiarized]: PSUS 6224 deals with renewable energy and cities' ability to generate their own power. Awareness of renewable energy sources is invaluable to sustainable planning outcomes as more planning jurisdictions seek to provide jobs within renewables and mitigate reliance on limited natural resources. Students examine past practices in which jurisdictions have been exclusively reliant on external energy sources and how such practices are causing increasing vulnerabilities in the face of rising costs, increasing unreliability, and global climate change with associated extreme weather conditions. Students develop policy-based solutions for addressing energy-related problems in cities. On a broad scale, students examine current and potential future impacts of global climate trends on the U.S. energy sector.
- **PSUS 6235 Food and Cities** [Familiarized]: Urban policy makers regularly confront issues that require guidance from researchers, advocates, and private interests regarding food, food production, nutrition, and related topics. Food and food systems have shaped the urban landscape throughout history and it has only been in recent years that a deeper understanding of how these systems can be integrated into urban planning and effectuate urban policy has been appreciated. This course examines the impact that food and food systems planning can and should have for the future of sound urban planning.
- **PSUS 6260 Introduction to Sustainable Design** [Familiarized]: This course examines the increasing role that sustainability must play in creating comprehensive plans. Past practices of

unsustainable design and building practices are examined and compared to future efforts and policies geared at incorporating more sustainability in planning. Students are introduced to the six basic principles of sustainable design and challenged to incorporate the importance and meaning of each into a sustainable philosophy by the end of the course.

- PSUS 6261 Ecology of the Built Environment [Familiarized]: In PSUS 6261 students examine past efforts to use coastal areas for economic development without an eye for sustainability. Students are tasked with synthesizing land use history and natural resource availability to recommend policy-based solutions for jurisdictions faced with watershed pollution and rising sea levels. The class incorporates research regarding energy flow, hydrological cycles, nitrogen cycles, and phytoremediation into area plans.
- PSUS 6262 Tools for Sustainable Design [Familiarized]: Sustainability in local planning is increasingly desired for urban planning professionals. In PSUS 6262 students gain an appreciation for the importance of advocating for the relatively low-budget sustainable practice of stormwater management. In this course, best management practices for stormwater management are introduced such as calculating a water budget, assessing best stormwater management practices, bioretention, utilizing local soils best fit for maximum infiltration of water, and bioswale designs so as to inform planning students avenues in which sustainable design can be implemented as low-cost budget items into a jurisdiction's comprehensive plan.
- PSUS 6266 Ecological Restoration [Familiarized]: In PSUS 6266 students gain a thorough understanding of how ecosystems have been disrupted in the past through a lack of careful planning or regulation. Specifically, PSUS 6266 focuses on the deleterious effects that invasive plants can create within ecosystems. The course covers the impacts that invasive species have had on native ecosystems in the past as well as a measures to facilitate ecological restoration after the removal of invasive species.
- PSUS 6268 Sustenance and the Landscape [Mastered]: PSUS 6268 examines historical patterns in urban food patterns wherein foods have historically been produced remotely and shipped to locations for consumption. The course then focuses on case studies and current examples of urban agriculture projects that showcase innovative applications of edible/productive landscape design in a variety of settings. The course also examines the future of urban agriculture and works to identify and respond to the increasing opportunities and needs for urban agriculture and edible crop production at a spectrum of urban sites. In addition, students articulate the significance of food deserts, local food hubs, food accessibility, and food miles from a planning and community level.

f) Global Dimensions of Planning: appreciation of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.

- **PSUS 6202 Urban and Environmental Economics** [Mastered]: PSUS 6202 concentrates on developing a set of principles and methods that form the core of a powerful way understanding urban and environmental challenges and their solutions, urban growth, environmental quality, public policy, and many other issues fundamental to contemporary development. The scope of the course is global as the applicability of neoclassic economics to problems faced by

practitioners of urban planning are not limited to isolated regions, but rather deal with the interactions and flows of commerce, culture, and materials on a large scale. In the past the course has included readings on the interdependence and global impacts of global warming, the historical governmental structures in place in least developed countries (LDCs), and examinations of Italian and Indian slums. Different planning approaches in different world regions are examined singularly as well as part of an interactive global system.

- **PSUS 6210 Sustainable Transportation Systems** [Familiarized]: An urban planning course that concentrates on transportation inevitably focuses on the flow of people. PSUS 6210 looks at local, regional, and global flows of people and culture via transportation systems in order to gain a broader appreciation of how successful interventions and innovations within transportation can be adapted for broader sectors of society in which some of sustainability's greatest challenges (environmental degradation, natural resource depletion) are directly accountable to the means by which people are transported on a global scale.
- **PSUS 6211 Regional Development and Agricultural Economics** [Mastered]: PSUS 6211 focuses on differing approaches to planning internationally. With a specific focus on least developed countries (LDCs), PSUS 6211 applies the field of development economics to examine the historical interactions, cultures, consumptions, and policy approaches found within a national and international context. Development economics brings together varied, but related, disciplines such as growth economics, urban and environmental economics, public and welfare economics, and agricultural economics to better understand approaches to land use and urban planning in world regions that typically have not had the benefit of formal urban planning in their history.
- **PSUS 6220 Planning Resilient and Low-Carbon Cities** [Mastered]: Globally, cities contribute over 70% of total greenhouse gas emissions. In turn, cities are disproportionately impacted by climate change at ever-increasing rates. PSUS 6220 covers urban mitigation and adaptation responses to such challenges as they are being developed and executed globally. City case studies and urban climate action plans from a variety of developmental and policy contexts are reviewed, including North America, Europe, emerging markets, and less developed countries. From a global dimension, different policy frameworks from national and international climate politics are discussed.
- **PSUS 6221 Scientific Basis for Climate Change** [Familiarized]: PSUS 6221 impresses upon students the global nature of planetary climate change. The flow and actions of people in one area of the globe can have lasting impacts on the health and wellbeing of others and consequently policies that are most successful at mitigating the harmful impacts of pollution are global in scope. Varying emitters in different regions of the globe are analyzed for their respective contributory dimensions to planetary warming. World regions are analyzed with special attention given to rain forests, glaciers, newly-industrialized urban areas, and oceans along with their corresponding impact on global warming.

A.2. Planning skills: The use and application of knowledge to perform specific tasks required in the practice of planning.

The use and application of planning skills are instructed in various capacities throughout the SUP curriculum. Depicted herein within section A.2. are the courses that most heavily delve into the application of knowledge to perform planning tasks.

a) **Research: tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources**

- **PSUS 6201 Principles of Sustainable Urban Planning** [Familiarized]: Readings for this course perennially comprise a mixture of books and scholarly research articles. In this manner, students within the course are required to be familiar reviewing and applying prior research to the class discussion and material. Furthermore, the students are required to analyze prior research from both peer-related journals as well as websites, news outlets, and related media. The role of primary and secondary sources is addressed within the course and students are required to submit research essays citing each.
- **PSUS 6202 Urban and Environmental Economics** [Familiarized]: Analyzing and applying prior research is conducted in 6202 through assigned readings, in-class discussions, and research papers. One objective of the course is for students to use the tools of urban and environmental economics to structure applied research questions. This is achieved, in part, through book reviews and technical research essays assigned.
- **PSUS 6203 Research Methods** [Familiarized]: This course is fundamentally about learning and applying tools for research methods applicable to urban and regional science and planning. It should be noted that the course does not address culling information from prior literature and research but rather focuses on the production of research. The course teaches tools for assembling research through the development of proficiency in geographic information systems (GIS) and econometric analysis, a method of statistical analysis for measuring the relationships at work in socioeconomic phenomena.
- **PSUS 6204 Legal Frameworks** [Mastered]: PSUS 6204 researches land use and growth management legal case histories and best practices to focus on the intersection between planning and real estate development, community and economic development, and public policy. Students learn to research U.S. case law and understand how legal decisions have a bearing on planning policies. Primary sources of information are differentiated from secondary sources in the course as students are tasked with devising a written report demonstrating their understanding of policy implementation derived from a selection of urban planning's most salient legal decisions. In addition, students are encouraged to cite case histories and planning research to aid them in their defense of policies when debating during in-class activities.
- **PSUS 6211 Regional Development and Agricultural Economics** [Familiarized]: PSUS 6211 introduces students to development economics and provides the tools needed for analyzing scholarly ideas and information from development economics and related fields to a national and international perspective with a special emphasis on least developed countries (LDCs). Development economics combines the research of related interdisciplinary fields comprising agricultural economics, urban and environmental economics, land use, growth economics, and public and welfare economics. Students in this course gain a greater appreciation for how research in economic theory affects the development and implementation of practical

solutions for such issues as climate change, land use challenges, and entrenched poverty. In turn, students use the tools of development economics to structure and answer applied research questions relevant to sustainable urban and regional planning.

- **PSUS 6213 Advanced Research Methods [Mastered]:** PSUS 6213 is concerned with the application of advanced research methods within the field of sustainable urban and regional planning. Students practice skills in research design, data collection, data management, data analysis, hypothesis testing and inference, and communicating and presenting analytical results. In the course students design and implement an independent research project that involves conducting a series of technical exercises that link urban economic theory to empirical findings. The course's final project is required to contain scholarly journal research publications as source material and is presented in the format of a peer-reviewed scientific journal.
- **PSUS 6220 Planning Resilient and Low-Carbon Cities [Familiarized]:** PSUS 6220 requires students to research case studies from international cities for their urban climate policies and provide both a written and oral presentation of their findings. The course helps students differentiate from primary as well as secondary sources when evaluating urban action climate plans. Students research urban vulnerability to climate change, compare different urban greenhouse gas emission findings, and analyze research pertaining to various governmental responses to urban climate change policies.
- **PSUS 6221 Scientific Basis for Climate Change [Familiarized]:** Students are provided with the tools and ability to research various sources for measuring such elements of anthropogenic global climate change as radiative forcing. Over the course of the semester, students are required to synthesize scientific information relating to climate change, and interpret scientific knowledge to form cogent opinions and policy recommendations.
- **PSUS 6222 Sustainable Building: Energy Demand, Efficiency, Supply [Familiarized]:** Students in PSUS 6222 research the fundamental properties of energy demand, efficiency, and supply in the economy with a specific emphasis on the building sector. In so doing, students are taught to understand the primary sources of information on global and national energy use trends. Students also research varying benchmarks implemented by different cities and jurisdictions to rate energy efficiencies.
- **PSUS 6235 Food and Cities [Familiarized]:** Every week during this course, students are presented with a topic matter related to food and food systems in the form of a presentation – both by the instructor and by one of their fellow students. The presentations draw from a variety of sources including academic research, seminal texts, and guest speakers. The students are expected to have read all the articles, digested their contents, and offer feedback for each topic. The final project in the course is the production of a detailed policy document regarding a subject related to food and food systems and its impact on urban planning. Students are required to cull knowledge from academic work, media reports, primary data sources, and even popular press.
- **PSUS 6260 Introduction to Sustainable Design [Familiarized]:** PSUS 6260 provides students with an overview of the sustainability philosophy. Students are assigned research into the subject of sustainable design/development and form their own defensible position with support from peer-reviewed academic sources. In this course, students practice culling prior academic research to use in defense of their own developed positions.

- PSUS 6261 Ecology of the Built Environment [Familiarized]: In PSUS 6261, students research coastal ecosystems and the affect that urbanization can have in these areas. Through a variety of discussions, presentations, and guest speakers, students gather knowledge pertinent to coastal planning and research such aspects as stream channelization, impervious surface runoff, land use history, and hydrologic cycles.
- PSUS 6262 Tools for Sustainable Design [Familiarized]: Students research a variety of sources, and also synthesize previous research provided to them by course materials and guest lecturers, regarding Best Management Practices (BMPs) for stormwater management. From the research students gain a thorough understanding of the reasons some practices have been effective in managing stormwater and runoff and why certain practices have failed to produce more than marginal or insignificant effects. From this research, students are able to analyze residential sites and assess BMPs that are already in place or that are needed.
- PSUS 6264 Native Plants I [Familiarized]: In this course, PSUS students gain an appreciation for field research and documenting their findings to be used in urban design elements of comprehensive plans. Specifically, through quantitative field exercises and observation, students learn to assess the applicability of landscape elements to various landscape and urban design uses. The field work and data collection emphasized in this course are valuable skills for planners used in assembling ideas and forming recommendations for policy.
- PSUS 6268 Sustenance and the Landscape [Familiarized]: Students examine past food production and accessibility patterns that have resulted in suboptimal nutrition and unequal access for different communities while also researching and considering best current practices. PSUS 6268 works to expand upon students' knowledge base with an overview of native plant species best for disease, pest, site/scale, yield, plant resistance, and climate resilience. Students also research various local and regional planning and zoning policies in order to ascertain how sustainable and edible urban agriculture initiatives can impact local planning efforts.

b) Written, Oral and Graphic Communication: ability to prepare clear, accurate and compelling text, graphics and maps for use in documents and presentations

- **PSUS 6201 Principles of Sustainable Urban Planning** [Familiarized]: The course perennially requires two in-class presentations in which oral and written communication are emphasized and conveying information to audiences is highlighted. The students are encouraged to utilize a variety of software to produce and deliver the presentations and style – as well as substance – are used within the grading rubric. The field of planning often underestimates the importance of presentation – both oral and graphic – and this course weaves these skills into its curriculum through encouragement and feedback. Presentations are required to connect to the audience with a level of professionalism, clarity, and conviction.
- **PSUS 6203 Research Methods** [Familiarized]: This course is focused on developing proficiency in geographic information systems (GIS) and econometric analysis. In this vein, the course instructs students how to prepare effective maps and graphics for presentations, research papers, and planning-related documents. During the course, students apply this knowledge to

a final research project in which graphical mapped output from GIS software is provided along with graphics from econometric software outputs.

- **PSUS 6204 Legal Frameworks** [Mastered]: Students are provided with a range of assignments for demonstrating their understanding of planning legal case histories and growth management practices. During in-class debates, the most effective presentations are presented cogently, professionally, and succinctly. Thus the students practice effective oral and graphic communication while researching germane case history, policy implications, and best management practices. Students produce presentations and written briefs to document certain aspects of the material studied such as zoning, land use, transportation systems, etc. Students present this material orally in class wherein they are ultimately judged by their level of both understanding and conveyance.
- **PSUS 6212 Sustainable Communities I** [Familiarized]: In the Sustainable Communities I course, students are tasked with presenting compelling arguments in written form for their defense of various sustainability plans with other classmates via the online class message board or blog. In this way, students are continually exposed to messaging and arguments provided by other students studying the same material while the instructor acts as a moderator to gauge progress. This is a medium that is used increasingly within planning for conveying messaging quickly, but is not typically thought of as an academic forum from which original ideas or research derives.
- **PSUS 6213 Advanced Research Methods** [Familiarized]: The Advanced Research Methods course requires students to complete an independent research project that integrates published academic journal articles on econometric and geospatial data analysis in a professional format akin to a peer-reviewed scholarly journal article. Students gain an appreciation of the importance of communicating analytical results to a general audience.
- **PSUS 6220 Planning Resilient and Low-Carbon Cities** [Familiarized]: PSUS 6220 requires students to research case studies from international cities for their urban climate policies and provide both a written and oral presentation on their findings. Additionally, the class provides students with exposure to a wide variety of both written and visual materials pertaining to urban climate change and environmental policy.
- **PSUS 6221 Scientific Basis for Climate Change** [Mastered]: In the Scientific basis for Climate Change course, students probe the scientific inquiry that has created the knowledge to date behind anthropogenic climate change. Lectures, discussions (in-class and online), small group work, multimedia presentations, out-of-class exercises, and a final project are all employed to provide students with the opportunity for active learning through multiple approaches and mechanisms. Students role-play steps to solve challenges related to climate change and create, debate, and judge policies and assertions about the need for action or inaction on challenges posed by climate change.
- **PSUS 6222 Sustainable Building: Energy Demand, Efficiency, Supply** [Familiarized]: In PSUS 6222, students are instructed how to communicate research findings from a variety of sources including municipal energy plans and individual projects. Students review and create a variety of spreadsheets and are instructed on how to distill and communicate the material within these spreadsheets for different audiences. Students create spreadsheets to estimate neighborhood-scale energy use, estimate greenhouse gas emissions, model the impact of efficiency strategies, and create demand growth scenarios. The value of these spreadsheets' findings cannot be

recognized without the ability of planners to communicate them. Therefore, this class provides students with the means by which they are able to convey and disseminate detailed information regarding the built environment and built systems in a clear and compelling fashion.

- **PSUS 6223 Sustainable Communities II** [Familiarized]: Students are introduced to different means for viewing and presenting future growth changes within urban planning in PSUS 6223. Urban Simulation Models (e.g., SLEUTH, CLUE-S, UrbanSim) are introduced to the students and their applicability in presenting graphic communication is discussed. The course makes use of geospatial analysis to explore the drivers of urban form and provides students with the tools and insight to create compelling presentations that make use geospatial analysis.
- **PSUS 6235 Food and Cities** [Familiarized]: Students in PSUS 6235 are tasked with producing weekly presentations to provide in-class on given topics related to food systems and urban planning (e.g., consumer demand, food deserts, food policy, nutritional taxation, etc.). The presentations are made to the class to inform and spark discussion/debate within the class among all of the students. Therefore, effective oral communication skills are emphasized and practiced. In addition, the course's final project is a complete policy proposal written from the perspective of a consultant and is to include compelling graphic charts, images, and text.
- **PSUS 6260 Introduction to Sustainable Design** [Familiarized]: This course operates from a design-concentration and provides students with an overall introduction to sustainability within urban and landscape design. Assignments in this course challenge students to provide graphic elements that relate to students' individual positions on the six basic principles of sustainable design. New sustainable design as well as retrofitting previous designs are both emphasized.
- **PSUS 6262 Tools for Sustainable Design** [Familiarized]: In this course, students learn to present stormwater management plans in clear and articulate detail, both verbally and graphically. In addition, students learn directly from a variety of local design and technical experts who supplement the course materials and underscore the importance of effective oral communication.

c) **Quantitative and Qualitative Methods: data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.**

- **PSUS 6203 Research Methods** [Mastered]: PSUS 6203 teaches the application of research methods and requires students to collect, analyze, and model data in both a geospatial and econometric context. Although the course focuses on quantitative data for use with the methods instructed using GIS software and econometric analysis, students are required to devise their own research topic and investigate their topic using GIS and statistical methods learned during the class. This provides students with the ability to analyze, apply, and mix (where applicable) both quantitative and qualitative methods.
- **PSUS 6211 Regional Development and Agricultural Economics** [Familiarized]: PSUS 6211 examines historical research – both quantitative and qualitative – in the field of development economics to understand, and better frame, problems faced in least developed countries

(LDCs). Development economics brings together several related academic fields including land use, agricultural economics, and public welfare, to provide policy analyses and inform international development projects. Students in this course are faced with the difficult and seemingly intractable problems found within LDCs and bring the tools of qualitative and quantitative research to bear upon them.

- PSUS 6213 Advanced Research Methods [Mastered]: This course concentrates on both qualitative and quantitative econometric and geospatial data sources and methods. The course emphasizes objectivity and involves the scientific method to form defensible, evidence-based policy. Students are required to research and synthesize a variety of scholarly journal articles in defense of evidence-based policy. PSUS 6213 furthers the Research Methods course with a more advanced study of econometric and geospatial data analyses.
- **PSUS 6221 Scientific Basis for Climate Change** [Mastered]: Students employ a variety of research and analyses tools to measure various quantitative indicators of anthropogenic climate change. Students develop and judge a record of scientific contributions made to date that demonstrate that climate has changed throughout the last century at many scales and due to many distinct influences. Students assemble and evaluate generalizations of various space and time scales over which elements of earth system change has occurred in response to radiative forcing. Additionally, students also actively create, evaluate, and debate various qualitative policies that can develop – or have previously been developed – as a result of quantitative findings pertaining to global climate change.
- PSUS 6222 Sustainable Building: Energy Demand, Efficiency, Supply [Mastered]: PSUS 6222 instructs students in creating alternative development scenarios for energy efficient building systems. In so doing, students analyze such quantitative data as cities’ benchmarks for energy efficiencies, building rating performance scores, debt investment strategies for energy efficient practices, and distributed energy supplies. Within the course’s final presentations, students are tasked with quantifying energy use, emissions, and health benefits for varying time periods. Students develop an Excel-based analysis of alternative development scenarios and use Excel to create demand growth scenarios. From a qualitative perspective, students learn to review policies and goals in order to evaluate jurisdictions’ climate action plans and understand terms and parameters associated with green neighborhoods, eco districts, and sustainable built systems.
- PSUS 6264 Native Plants I [Familiarized]: Through quantitative field exercises and observation, classroom lectures, and slide presentations and discussions, students in PSUS 6264 learn to collect and synthesize observations (both quantitative and qualitative) and assess their applicability to informing sustainable landscape and urban design elements.

d) Plan Creation and Implementation: integrative tools useful for sound plan formulation, adoption, and implementation and enforcement

- **PSUS 6210 Sustainable Transportation Systems** [Familiarized]: PSUS 6210 examines the role and importance that transportation plays in sustainable plan formulation and implementation. The course examines transportation systems at a regional level and students gain an appreciation for the importance of how to integrate local plans with the plans of neighboring

jurisdictions. Sustainable transportation systems require planners to look beyond their immediate environmental or jurisdiction and integrate entire networks to coalesce around common goals and visions. This course provides students with the tools to cogently convey the importance of sustainability within transportation and integrate this into successful sustainable plan elements.

- **PSUS 6211 Regional Development and Agricultural Economics** [Familiarized]: This course provides an economic element to plan implementation with a national and international context. Students learn how to articulate the relevance of development economics to sustainable urban planning. The course works within a national and international context and weaves issues of climate change into the curriculum throughout. Students gain a deep appreciation for the role that climate change, food systems, and economics can play in developing and implementing sustainable plans.
- **PSUS 6212 Sustainable Communities I** [Familiarized]: PSUS 6212 examines the creation and implementation of sustainability within comprehensive planning. Course readings and discussion deal with tools implemented by planners for successful formulation of sustainability within elements of comprehensive plans including urban design solutions, adaptive reuse of existing land (e.g., re-inhabiting, brownfield reuse), preservation incentives (e.g., TDR's, farmland preservation), and economic competitiveness (e.g., empowerment zones, arts and entertainment districts, etc.).
- **PSUS 6221 Scientific Basis for Climate Change** [Familiarized] PSUS 6221 arms students with the ability to create, debate, implement, and judge integrative tools for sound planning elements related to environmental quality to be included in comprehensive plans or climate action plans. Alternative incentives for energy creation, transportation, and land use elements are discussed.
- **PSUS 6222 Sustainable Building: Energy Demand, Efficiency, Supply** [Familiarized]: Developing an understanding of the energy use in built environments represents an integrative tool for planners to utilize within their field. PSUS 6222 provides students with this understanding along with an emphasis on fundamental drivers of energy demand, strategies to promote energy efficiency, and essential features of energy supply. Furthermore, this course addresses how advances in construction technology can help counter greenhouse gas emissions. Collectively these are important aspects for planners to grasp and implement in sound planning.
- **PSUS 6223 Sustainable Communities II** [Familiarized]: PSUS 6223 details the theory and tools relevant to the assessment and transformation of neighborhoods and communities. The course deals with widely-used assessment tools such as LEED for Neighborhood Development (LEED-ND), BREEAM Communities, Enterprise Green Communities, STAR communities, and others. Additionally, the course analyzes geospatial analysis tools and urban growth simulation models and their utilization within plan formulation and assessment.
- **PSUS 6224 Sustainable Energy for Cities and the Environment** [Familiarized]: In PSUS 6224 students use course readings and class discussions to develop policy-based solutions for addressing energy-related problems in cities. The course looks at vulnerabilities of existing urban structures and explores implications of, and solutions to, energy-related problems likely to arise in cities of the present and future. Developing an understanding of the importance of creating renewable energy sources within jurisdictions is an increasingly integrative tool within sound plan formulation.

- PSUS 6260 Introduction to Sustainable Design [Familiarized]: PSUS 6260 provides students with an overview of the six basic principles of sustainable design. In so doing, students research and apply aspects of these principles within the context of urban planning. Through this course, students gain an understanding of how sustainable design practices and recommendations can be formulated into comprehensive plans as well as into sustainable design elements.
- PSUS 6261 Ecology of the Built Environment [Familiarized]: PSUS 6261 provides students with tools useful for coastal sustainable planning. Students interested in planning for coastal areas or areas largely affected by coastal regions will be provided with detailed knowledge about stream channelization, watershed maintenance and protection, and habitat fragmentation. The course approaches planning for coastal areas from a sustainable design perspective.
- PSUS 6262 Tools for Sustainable Design [Familiarized]: In PSUS 6262, students are introduced to an array of Best Management Practices (BMPs) for stormwater management. Students also learn to implement Low Impact Designs (LIDs) for water retention and infiltration. These tools are increasingly valuable for planners in order to advise small-scale sites, parks, schools, commercial, and residential plans with water management elements. For environmental, climate change, and landscape design plans, these tools are imperative for a planner to understand and be able to implement.
- PSUS 6266 Ecological Restoration [Familiarized]: Students learn specific tools for creating sustainable design elements for urban and regional planning in PSUS 6266. Specifically, the course impresses the importance of ecological planning and ecological restoration with an emphasis on invasive species' impact and removal.
- PSUS 6268 Sustenance and the Landscape [Familiarized]: PSUS 6268 familiarizes students with understanding and designing sustainable landscapes related to food production and urban agriculture according to local planning and zoning policies. Through this course, students are armed with the knowledge of how and why edible plants and food systems contribute to the sustainability triple bottom line as an ecological service. This, in turn, provides students with a better understanding of what is required for facilitating urban agriculture and food production policies to be adopted and enforced in local plans.

e) Planning Process Methods: tools for stakeholder involvement, community engagement, and working with diverse communities

- **PSUS 6201 Principles of Sustainable Urban Planning** [Mastered]: Employing planning process tools are discussed within this course from a historical context. Specifically, the importance of involving broad-based coalitions in order to achieve effective plans is emphasized. The field of planning has a long history of instances in which planners have either shunned engagement or provided incomplete and/or erroneous information to stakeholders and thus the need to involve and engage ever-increasing communities within the profession is imperative. In this course, tools for such involvement and engagement are weighed on their merits and judged through their historical application.
- **PSUS 6204 Legal Frameworks** [Familiarized]: In the Legal Frameworks course, students learn – largely through studying best practices and legal case histories – what constitutes methods for

effective planning. The often unintended consequences of planning policies (e.g., gentrification, regional emigration, etc.) are examined in conjunction with best practices to impress upon students the effective means for implementing stakeholder involvement and engagement. Students practice engaging during in-class exercises in which different sides of planning-related debates are argued verbally. These activities provide students with the exposure and practice for appreciating different, and often adversarial, perspectives.

- **PSUS 6210 Sustainable Transportation Systems** [Familiarized]: The Sustainable Transportation Systems course examines how transportation impacts diverse communities – especially from a socioeconomic standpoint. The real estate value in different communities is impacted by available transportation systems and vice-versa. The course discusses tools for engaging with diverse communities to find common ground and solutions in achieving sustainability and economic stability within a region via the transportation network. Additionally, the means by which communities can communicate the importance of the triple bottom line of sustainability is examined in detail.

f) Leadership: tools for attention, formation, strategic decision-making, team building, and organizational/community motivation

- **PSUS 6204 Legal Frameworks** [Familiarized]: Within PSUS 6204, students are taught both sides of legal case histories for landmark urban planning courses. The students take this knowledge and apply it both in written and in-class assignments. Students have weekly debates in which they argue different sides of legal cases, land use policies, growth management approaches, and economic development tactics in order to evaluate the efficacy of various tools that planners have implemented in forming plans and policies. The tools used during these exercises are valuable for consensus-building, team building, and community motivation in that the students are tasked with evaluating all perspectives in various issues. Issues are not viewed in isolation and therefore students gain a deeper understanding of what constitutes effective leadership.
- **PSUS 6210 Sustainable Transportation Systems** [Familiarized]: PSUS 6210 examines the role that transportation systems can play in harnessing community involvement and motivation. The class includes broadening stakeholder involvement by including design, green street development, and mass transit enhancements to spearhead greater community and organizational involvement within the planning arena. In this way, transportation becomes a conduit for involving a wider base of the public into planning.

A.3. Values and ethics: Values inform ethical and normative principles used to guide planning in a democratic society. The Program shall appropriately incorporate issues of diversity and social justice into all required courses of the curriculum, including:

Values and ethics are discussed and addressed in many of the courses within the SUP curriculum. In particular, matters pertaining to ethical issues are discussed herein within A.3. as they pertain to sustainability.

a) Professional Ethics and Responsibility: appreciation of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation (including principles of the AICP Code of Ethics).

- **PSUS 6201 Principles of Sustainable Urban Planning** [Mastered]: The planning profession follows a strict code of ethics, promulgated by the American Institute of Certified Planners (AICP), which SUP supports through this course. Certification within the field of planning is specifically addressed within this course. This course has historically been taught by an AICP planner who represents SUP within the National Capital Area Chapter of the APA. The role of planning ethics is addressed within the course using the AICP Code of Ethics as a framework. The students are expected to familiarize themselves with the code of ethics and an understanding of the principles behind the code of ethics – that is the appreciation of key issues related to decision-making, research, and client representation – are discussed at the end of the semester so as to superimpose the application of ethics onto the base of historical and applicable planning built throughout the course of the semester.
- **PSUS 6204 Legal Frameworks** [Familiarized]: Students gain a greater appreciation of the key issues involved in the legal aspect of planning ethics and analyze historical precedents that illustrate some of the consequences that planners have faced (or have avoided facing) when ethical decisions have been encountered. In particular, client representation by planners is examined within the context of real estate development, land use planning, community and economic development, and public policy.
- **PSUS 6221 Scientific Basis for Climate Change** [Familiarized]: PSUS 6221 brings an element of professional responsibility to the role of planners in mitigating global warming. Key ethical questions of the planner's role in addressing a topic that extends beyond the local scope are debated in class. Are planners responsible for raising the need for action on challenges posed by climate change? Students learn to interpret research on anthropogenic climate change while anticipating certain biases.

b) Governance and Participation: appreciation of the roles of officials, stakeholders, and community members in planned change

- **PSUS 6201 Principles of Sustainable Urban Planning** [Familiarized]: Closely related to the history and theory of planning, the roles of different players in planning are underscored throughout readings and discussions for this course. Policy changes brought about through planning are often the result of coordinated efforts waged by broad coalitions and the participatory roles plaid by planners and other stakeholders to not only plan, but implement change, are detailed within this course. Through the investigation of legal cases in which participatory avenues were not provided to stakeholders as well as readings detailing general planning process, the role of government and participation are highlighted.
- **PSUS 6204 Legal Frameworks** [Mastered]: The Legal Frameworks course focuses on economic, human health, and social forces that influence land use and development. In so doing, the different levels of involvement within the planning process are considered as well as the different scales at which planning can be targeted. The individual, community, region, state,

and national perspectives are considered when examining the legal and practical implications of case histories and best practices. From a legal standpoint, students gain an appreciation for the consequences when officials and community members are not adequately represented or involved in the planning process. Furthermore, students research planning processes that have led to policy creation and the varying roles and responsibilities executed by different stakeholders in accomplishing meaningful planned change.

- **PSUS 6210 Sustainable Transportation Systems** [Mastered]: Designing, drafting, and implementing sustainable transportation systems within a local community or region requires the support and coordination of many stakeholders. This course examines the planner's role in the process of participation with particular emphasis on the role that the planner has with developers, architects, civil engineers, state agencies, local planning commissions, and citizens. Transportation is an aspect of planning that involves numerous stakeholders and the course examines the interaction of land use, land value, environmental impact, density, and politics with transportation.
- **PSUS 6212 Sustainable Communities I** [Familiarized]: PSUS 6212 provides students with the experience of exploring participation and the roles of stakeholders in executing planned change. Students examine planning sustainable communities at the state level, the local level via local government comprehensive planning, small area plans, development regulations and permitting, and through larger policy arenas. Within the roles played at various levels by different individuals and groups, the impacts made on key sectors of buildings, neighborhoods, transportation systems, energy, air quality, water quality, and food systems are examined.
- **PSUS 6220 Planning Resilient and Low-Carbon Cities** [Familiarized]: Planning Resilient and Low-Carbon Cities deals with the review of urban climate action plans and their effectiveness in contributing to global environmental sustainability. The course addresses the roles that governmental policy, as well as local stakeholders, play in executing climate action plans and setting benchmarks for objective results. The roles of institutions, governance, and community for climate change mitigation and adaptation are examined through course readings, discussions, and presentations.
- **PSUS 6235 Food and Cities** [Familiarized]: PSUS 6235 examines the weighing of the roles and evidence provided by researchers, advocates, and private interests in food policy within an urban context. The roles played by each of these groups are often divergent and students are tasked with understanding these roles and perspectives and also weighing the evidence provided by each. Students study the issue of food and food production using a variety of lenses including history, technology, economic theory, geography, and public policy.
- **PSUS 6260 Introduction to Sustainable Design** [Familiarized]: PSUS 6260 examines governance and participation within the climate change arena by focusing on the ways in which sustainable design can be implemented at both a policy level and within smaller local communities. Active involvement within sustainability requires both knowledge and participation such as reduce/reuse/recycle campaigns that are implemented by numerous stakeholders on a grassroots level.

c) Sustainability and Environmental Quality: appreciation of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.

- **PSUS 6201 Principles of Sustainable Urban Planning** [Familiarized]: Environmental sustainability is a topic addressed, discussed, and investigated within nearly every course in the SUP curriculum. PSUS 6201 addresses the exigency needed to incorporate environmental quality into planning process. Readings selected for the course delve into such topics as smart growth's role in environmental sustainability, potential social conflicts wrought from environmental advocacy, and market-related impacts from policies and legislation engineered for environmental sustainability. Case studies of urban growth boundaries and subdivision restrictions are investigated with an eye to both market considerations as well as environmental concerns. The causes of pollution are investigated to not only recognize harmful practices of the past and present, but also to acquire a greater understanding of the challenges posed from an industrial and capitalistic paradigm that, while in certain regards is harmful, is also often at odds with environmental sustainability.
- **PSUS 6202 Urban and Environmental Economics** [Familiarized]: One of PSUS 6202's core learning objectives is for students to be able to articulate the relevance of economics to sustainable urban planning. This objective, of course, is multi-faceted, but through varied assigned readings the course delves into economic understandings of urban and environmental challenges and their solutions, urban growth, and environmental quality. Through regularly assigned readings dealing with climate change, urban density, and land economics, students gain a macroeconomic understanding of such topics as property rights contrasting with plans that emphasize environmental sustainability, local economic development pitted against global pollution controls, and natural resource demand versus preservation. With this background, students are better equipped to create sustainable plans that can anticipate and obviate potential conflicts.
- **PSUS 6204 Legal Frameworks** [Familiarized]: Students examine best practices, case histories, and contextual information related to environmental quality, pollution control, and natural resource sustainability. Students examine the factors that are often at odds with policies targeting environmental sustainability and gain a deeper appreciation for the challenges faced by planners when attempting to implement sustainability measures.
- **PSUS 6210 Sustainable Transportation Systems** [Mastered]: This course examines transportation systems with an emphasis on the triple bottom line of economy, environmental, and societal sustainability. The course focuses on transportation with broader aspects of sustainability and technology. Course readings detailing the role of ongoing transportation systems' reliance on fossil fuels and environmental degradation are examined in detail as are burgeoning efforts to rework current transportation systems into wholly sustainable solutions. The roles that climate bills, pollution caps, the lobby industry, and technology play in perpetuating (or curtailing) de facto transportation systems are analyzed and discussed in detail.
- **PSUS 6211 Regional Development and Agricultural Economics** [Familiarized]: This course focuses on the intersection of land use and development economics within a national and international context. Students relate economic theory to the development and implementation of practical solutions for climate change adaptation. PSUS 6211 examines

sustainability in depth from a climate change perspective examining such issues as world food systems and sea level rise.

- **PSUS 6212 Sustainable Communities I** [Familiarized]: This course carries a common element of sustainability throughout all of the readings and course discussions. In so doing, the course addresses how environmental aspects affect various levels of planning through such sectors as green buildings, water quality maintenance, sensitive land restrictions, farmland preservation, and brownfield redevelopment.
- **PSUS 6220 Planning Resilient and Low-Carbon Cities** [Mastered]: This course focuses on the special role that urban planning plays at various scales in climate-smart and climate-resilient urban responses. The course provides direct exposure to methodologies to assess urban carbon footprints, conduct urban risk assessments, and harness economic valuations of the costs of climate impacts and of the benefits of adaptation and greenhouse gas emission reductions. City studies and urban climate action plans from a variety of developmental and policy contexts are reviewed over the course of the semester.
- **PSUS 6221 Scientific Basis for Climate Change** [Mastered]: PSUS 6221 examines, in-depth, the scientific basis and research behind human causes of global climate change and planetary warming. The role of pollution, carbon production, and biogeochemical cycles are evaluated in the context of policies and governmental interventions. The degree to which this science impacts and affects adaptation planning is debated through a variety of approaches for active learning.
- **PSUS 6222 Sustainable Building: Energy Demand, Efficiency, Supply** [Familiarized]: Within the built environment, where planners quite often work, energy use is increasingly becoming a paramount aspect of sustainable planning. PSUS 6222 examines the relationship between energy supply and demand in development and addresses how advances in construction technology can help to counter greenhouse gas emissions. Natural resource reductions and greenhouse gas emissions are directly contributory to climate change and planners need to have a thorough understanding of how the built environment can be planned in sustainable ways so as to minimize detrimental contributions of building practices in the future. In this course students gain skills to plan, design, and practice modeling energy efficiencies in the built environment.
- **PSUS 6224 Sustainable Energy for Cities and the Environment** [Familiarized]: Due to ongoing reliance on natural resources for energy production in cities, planners need to be armed with the knowledge of developing sustainable and renewable energy sources for jurisdictions. This course examines past vulnerabilities in the U.S. energy sector and examines goals of promoting energy security in future comprehensive plans. Students examine such policy-based solutions as tax incentives for energy production, energy and pollution standards, and renewable energy system benefit trust funds. Students gain a thorough appreciation of the importance that renewable energy systems can play in creating sustainable futures.
- **PSUS 6260 Introduction to Sustainable Design** [Familiarized]: This course provides students with an overview of a range of sustainable design practices. Students learn the value, obstacles, and success rates of several sustainable Best Management Practices (BMPs) and learn how sustainability within urban and landscape design can directly impact community's environmental benchmarks and goals.

- PSUS 6261 Ecology of the Built Environment [Familiarized]: In PSUS 6261 students gain the unique perspective of the vulnerabilities involved with coastal planning. Specifically, the environmental impacts that planners in jurisdictions with tidal wetlands face with pollution downstream from watersheds and the associated energy flows, hydrological cycles, nitrogen cycles, and phytoremediation that occur in jurisdictions most vulnerable to rising coastal waters.
- PSUS 6262 Tools for Sustainable Design [Familiarized]: PSUS 6262 instructs students on the environmental impacts of creating sustainable urban design. In particular, this course examines best management practices for stormwater management including calculating a water budget, assessing best stormwater management practices, bioretention, utilizing local soils best fit for maximum infiltration of water, and bioswale designs so as to inform planning students with avenues in which sustainable design can be implemented as low-cost budget items into a jurisdiction's comprehensive plan. Such practices are paramount to planning for sustainable futures.
- PSUS 6264 Native Plants I [Familiarized]: Within sustainable landscape and urban design, an appreciation for responsible uses of natural resources and an ability to envision sustainable futures are imperative. In PSUS 6264, students gain a deep appreciation of how native plants are fundamental to the practice of environmental sustainability and ecologically based landscape design. The role that native plants play within the natural resource ecosystem as well as within the food web is analyzed in detail. Students gain an understanding of the ecological importance in identifying and recommending native plants for sustainable urban and landscape design elements.
- PSUS 6266 Ecological Restoration [Familiarized]: In this course, students learn the importance of natural resource control within ecosystems with an emphasis on invasive plants. The course covers the full impact of invasive plant species on native ecosystems. Through this knowledge, students are impressed with the importance of planning for native ecosystem plantings within design elements. PSUS 6266 also instructs students how to plan for future ecological restoration through the removal of invasive plant species and ecological site restoration measures.
- PSUS 6268 Sustenance and the Landscape [Familiarized]: PSUS 6268 teaches students how to facilitate sustainable futures in urban areas by enabling local food production. Students learn sustainable design methods and tools used to create and support edible landscapes. Furthermore, students learn to articulate the ecological role of urban agriculture as a driver to support sustainable uses for water, soil, habitat, and biodiversity.

d) Growth and Development: appreciation of economic, social, and cultural factors in urban and regional growth and change

- **PSUS 6201 Principles of Sustainable Urban Planning** [Familiarized]: PSUS 6201 deals heavily with the intersection of economic, social, and cultural factors affecting urban/regional growth and change. Throughout the coursework perspectives stemming from economic growth are compared and contrasted with advocacy for social justice.

- **PSUS 6202 Urban and Environmental Economics** [Mastered]: This course deals heavily principles and methods to understand issues that are fundamental to contemporary urban growth and development. A main objective of the course is to describe the subfields of urban economics and environmental economics and their intertwined relationship. Environmental economics are interdependent with regional social and cultural factors and thus the interplay between economics and culture and their profound impact on regional growth and change cannot be understated. Students in the course are introduced to the development and implementation of econometric models that are used to gauge rates and factors of urban growth and change. Land use regulation and market forces are further analyzed within the class readings to provide students with an appreciation of the rapidity of regional growth (or lack thereof) and change.
- **PSUS 6204 Legal Frameworks** [Mastered]: The legal frameworks course examines the history and fundamentals of land use planning and growth management systems by covering a range of legal issues. In so doing, students examine the economics and social factors involved in urban and regional change via legal case histories and best practices with particular emphasis paid throughout the semester on the intersection of real estate development, land use planning, community and economic development, and public policy. Students examine land use and planning innovations and their implications for housing, transportation systems, community resilience, public health, and energy policy.
- **PSUS 6210 Sustainable Transportation Systems** [Mastered]: Urban and regional growth and change have been indelibly impacted from transportation systems. Cities and urban areas can often trace their initial footprint as well as subsequent geographic growth to the most dominant form of transportation present within their regions. Older cities dominated by pedestrians have unmistakable cores that differ from later cities developed by mass transit and more modern cities developed around the automobile. The abundance (or lack thereof) of transportation systems affects economic (real estate, land use, land value) and social (density, adjacency) aspects. This course examines the role that transportation systems have played in the growth and development of cities and urban areas with a special emphasis on examining what makes certain transportation systems sustainable and, therefore, what helps urban areas themselves remain sustainable from an environmental, economic, and social standpoint.
- **PSUS 6211 Regional Development and Agricultural Economics** [Mastered]: PSUS 6211 applies neoclassical economics to the challenge of improving life in least developed countries (LDCs). In so doing the course examines the environmental and social factors at play in national and international contexts toward development growth and change. The course provides students with the ability to relate economic theory to the development and implementation of practical solutions for responsible growth and change while understanding the often intractable problems experienced from entrenched poverty. Growth and change within LDCs face unique political, economic, and practical challenges that are not always experienced in more developed regions. This course provides students with the consideration of contributory factors that merge economic theories with practical applications in a way that more traditional courses focused on urban growth do not.
- **PSUS 6221 Scientific Basis for Climate Change** [Familiarized]: The impact of growth and development on anthropogenic climate change is a central topic in PSUS 6221. The course

charts the rapid changes documented in research and measured through various scientific estimates indicating that population growth and change have caused, and are continuing to cause at ever-increasing rates, alarming levels of planetary warming. The imperative need for more sustainable growth and development is presented through various readings and class discussions.

- PSUS 6222 Sustainable Building: Energy Demand, Efficiency, Supply [Mastered]: PSUS 6222 looks at economic drivers of urban growth and change via the demand and supply systems of sustainable energy. The course examines the intricate relationship between energy demand and supply in development and addresses how advances in construction technology can help to counter greenhouse gas emissions created or increased during development. Students learn a variety of modeling and forecasting skills that are used to estimate and measure urban growth and development from a neoclassic economic perspective while weaving in aspects of sustainable practices within the building industry.
- PSUS 6224 Sustainable Energy for Cities and the Environment [Mastered]: PSUS 6224 examines growth and development from an economic perspective with a focus on energy availability, management, and distribution. Urban and regional growth and change in the future are tied to energy reliance and this course covers past and future uses of energy. Vulnerabilities and opportunities for energy use in future growth and development are examined from a policy context. Urban growth in Least Developed Countries (LDCs) is often vulnerable to energy management problems and international sustainable energy efforts are analyzed within the course as well. The political aspects of urban and regional growth management are examined within the context of energy policies.
- PSUS 6235 Food and Cities [Familiarized]: Food and food systems are intrinsically tied to economic, social, and cultural factors. Students study the issue of food and food production using a variety of lenses including history, technology, economic theory, geography, and public policy in order to gain a deeper appreciation of how the economics and sociocultural aspects of food production have shaped urban growth and policy.
- PSUS 6260 Introduction to Sustainable Design [Familiarized]: PSUS 6260 is concerned with applying sustainability to urban growth and development. Students examine the ways in which development can impair watersheds, natural resources, surface permeation, and other factors that can be harmed by development designed without sustainable practices.
- PSUS 6261 Ecology of the Built Environment [Familiarized]: In PSUS 6261, students examine how growth and development in and near coastal areas and along major watersheds affect regional ecology and how detrimental effects can be mitigated by implementing sustainable practices. Students gain an appreciation for the role that sustainability can play in the design of growth and development in Ecology of the Built Environment.
- PSUS 6262 Tools for Sustainable Design [Familiarized]: As growth and development continue, in order to implement sustainable design, planners need to recognize the importance of effective stormwater management. In PSUS 6262, students are introduced to some of the current Best Management Practices (BMPs) for effective stormwater management and preventing detrimental stormwater runoff. Growth and development often reduces land that is available to serve as natural buffers and filtration for stormwater and as such, growth and development contribute negatively to an area's water pollution. In this course, students learn

tools for sustainable design in order to create sustainable plans that mitigate the negative environmental aspects of growth and change.

- **PSUS 6268 Sustenance and the Landscape [Familiarized]:** PSUS 6268 is based in urban-agriculture and weaves the use of urban food cultivation to economic, social, and cultural factors by articulating how and why local food production contributes to the sustainability triple bottom line. Ecologically, the course examines the role that edible local food production plays as a driver to support sustainable uses for water, soil, habitat and biodiversity. Socially and culturally, the course examines the roles that edibles can play in mitigating food deserts, spurring local food hubs, and beautifying urban design.

e) **Social Justice: appreciation of equity concerns in planning.**

- **PSUS 6201 Principles of Sustainable Urban Planning [Mastered]:** This course addresses community development through social justice from a legal perspective as well as through targeted class readings and discussions. Topics such as redlining, blockbusting, and zoning are investigated for their historical racial components. Notable planning court decisions with racial basis (e.g., *James v. Valtiera*, *Village of Arlington Heights v. Metro Housing Development*) are reviewed and orally portrayed in class, and historical paradigms in social and equity planning are addressed and analyzed (e.g., Norm Krumholz, Paul Davidoff).
- **PSUS 6204 Legal Frameworks [Mastered]:** The legal frameworks course deals with the economic justice involved in social equity from a legal standpoint. Growth management systems have often come head-to-head with advocates for social equity and this intersection is examined in detail within the course. Specifically, do growth management principles advance social equity or hinder it via increased land values and diminished (developable) land supply? Topics such as inclusionary zoning, environmental justice and spatial hazard placements, and development bonuses are viewed from a legal perspective and their respective roles on social equity are scrutinized.
- **PSUS 6210 Sustainable Transportation Systems [Mastered]:** The Sustainable Transportation course details the role that transportation plays (or fails to play) in promoting social equity. Transportation's impact on social equity is discussed throughout the semester as transportation can, at a fundamental level, act as a barometer for social progress in that different socioeconomic groups, at any time, have varying access to different forms of transportation to meet quotidian needs. In addition to examining the role that transportation can play in leveling or exaggerating social inequities, the course also provides students with a means for measuring equity and how the benefits of alternative transportation investments can impact social equity.
- **PSUS 6211 Regional Development and Agricultural Economics [Familiarized]:** While PSUS 6211 is primarily concerned with the role that development economics plays in land use and planning policy within least developed countries (LDCs), one cannot responsibly examine planning in an international context without recognizing equity concerns. In this course students are familiarized with how world food systems, environmental degradation, and market consumption can be at odds with planning for a sustainable future. When a population is faced with entrenched poverty, hunger, and political upheaval, such goals as social equity and

environmental sustainability are not often provided the weight afforded in more developed regions. This course provides students with a more global consideration for equity concerns in planning.

- **PSUS 6212 Sustainable Communities I** [Familiarized]: By focusing on the triple bottom line of sustainability within planning (economic, environmental, societal), this course tackles equitable development and environmental justice. In particular, the course examines the role that natural disasters have played on social equity and how rebuilding in the aftermath of disaster is often highlighted in place of preemptive and anticipatory sustainable planning for all communities.
- **PSUS 6222 Sustainable Building: Energy Demand, Efficiency, Supply** [Familiarized]: Students in PSUS 6222 acquire and implement tools for modeling neighborhoods and learn how energy supply, demand, and efficiencies can (and should) affect social equity. Students develop and practice skills to evaluate building and neighborhood-scale energy use and emissions and how they achieve community-wide goals. In so doing, students evaluate the role that social equity plays in community-wide energy access. Students examine energy disclosure policies in several large U.S. cities.
- **PSUS 6224 Sustainable Energy for Cities and the Environment** [Familiarized]: Access to available (and affordable) energy is becoming an increasingly important issue for growing urban and regional areas. In PSUS 6224, students examine opportunities and vulnerabilities within the energy sector for reliable energy that is both sustainable and readily available while also examining social equity issues surrounding access. International perspectives on these issues are also provided.
- **PSUS 6235 Food and Cities** [Familiarized]: PSUS 6235 examines social justice from a policy perspective regarding food/nutrition access within urban landscapes. The often opposing perspectives between private interests and public health on policies within urban areas are examined. For example, the course examines placing soda machines and fast food vendors in poorer urban schools in order to provide the school with additional revenue at the potential risk of students' health. Access to nutritional food outlets (or lack thereof) in poorer urban areas is also examined.

B. Areas of specialization and electives: The Program shall have sufficient depth in its curriculum and faculty in the specialization areas and electives it offers to assure a credible and high quality offering.

The SUP MPS offers two areas of specialization: (1) Climate Change Management and Policy, and (2) Sustainable Landscapes. Students enrolling in the SUP MPS are able to choose either of these specializations as the depth of courses are sufficient to support both from a curriculum as well as a faculty vantage. As noted above—and within the SUP Strategic Plan—a third area of specialization focusing on sustainable urbanization in Asia is also proposed.

B.1. Specializations: When a program includes specialization fields, it is assumed that they are built on top of the general planning foundation and that courses in the areas of specialization add significantly to the basic planning knowledge, skills and values. Programs must demonstrate

that there are enough courses in the areas of specialization that students get the depth and range of materials to give them a level of expertise

SUP has currently incorporated two areas of specialization since its inception in 2011:

- Climate Change Management & Policy
- Sustainable Landscapes

Students wishing to pursue the Sustainable Landscapes specialization have been able to take classes within the College of Professional Studies' separate Sustainable Landscapes graduate program. This program has offered classes, which are cross-listed with the Sustainable Urban Planning (SUP) MPS courses, that provide students pursuing the Master's in Sustainable Urban Planning the ability to focus on Sustainable Landscapes with a previously formed menu of courses that addresses their areas of interest. Since this area of graduate program was offered wholly separate and previous to the Sustainable Urban Planning MPS, these courses have had the academic wherewithal and scrutiny within GW to provide a sufficient history and depth of scholarship for SUP students to focus on this specialization.

Students wishing to pursue the Climate Change Management and Policy specialization within SUP, who are the majority of SUP students, form the core of the SUP program. As standard #4 A.3.C attests (Sustainability and Environmental Quality), SUP courses run the gamut on addressing sustainability and environmental quality through instruction on neighborhood design, renewable energy production, stormwater management, and building efficiencies (to name a few). SUP is the graduate program for planners looking to pursue research and policy on urban climate change policy. Faculty specializing in climate change management include the Vice President of the US Green Building Council and a World Bank Senior urban specialist on resilience management. The program is currently spearheading an international studio in Dhaka, Bangladesh to provide students with on-the-ground international exposure to one of the world's most populous nations to face immediate global climate change exigencies.

B.2. Electives: The curriculum shall contain opportunities for students to explore other areas such as exposure to other professions, other specializations, and emerging trends and issues.

The minimum requirements for an accredited planning program are augmented with a variety of connected disciplines and emphases. SUP is a small program and thus does not run a large number of electives. The electives are typically demand-driven and generally comprise areas that represent fields of study that are representative of certain faculty members' areas of expertise. In addition, students have the ability to take any graduate courses provided by George Washington University. This can occur either within the College of Professional Studies (CPS), or any other graduate program, and can occur in the satellite campus in Ballston, Virginia or on GW's main campus within the District of Columbia. For instance, students within SUP have taken several courses from George Washington University's Business School as they offer a graduate certificate in walkable urban real estate and place management. From this certificate program, for instance, FINA 6290 (Walkable Urban Development, Strategy and Place Management) has

been a popular course for SUP students (<http://business.gwu.edu/programs/executive-education/professional-certificates/walkable-urban-real-estate-development/>).

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- C. Instructional delivery and scheduling: Courses shall be taught by fully qualified faculty, and appropriate instructors shall be assigned for core, specialized and elective courses. In general, most core courses will be taught by fulltime planning faculty. Courses shall be offered in formats and times to assure appropriate student access to them and timely completion of program requirements.
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All SUP courses are offered in the evening, between 6:00 and 9:00 PM, in order to accommodate full time working professionals. This has proven to be advantageous within the Washington DC metro area as the majority of the SUP students maintain full or part time jobs within the region and are seeking to advance their professional careers with a degree from the Sustainable Urban Planning program at GW. Therefore, the courses offered for specialization are provided at the same times and within the same formats as the core courses. Notable exceptions are provided for certain courses that require daytime field visits as well as winter-term courses. In these instances, students are made aware of any scheduling anomaly that may deviate from a typical weekday evening schedule. Faculty providing instruction within specialization courses are uniquely qualified to deliver the material provided. As Appendix IVA to this report will attest, the faculty scheduled to teach each course in the areas of specialization bring an in-depth and detailed knowledge to the course and are uniquely qualified to provide instruction in these specializations.

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- D. Facilities: Students, faculty and staff shall have access to sufficient physical resources and facilities to achieve the Program's mission and objectives. The facilities shall be appropriate for the level and nature of required classrooms, studio workspace, and offices.
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All SUP facilities, including classrooms, computer labs, and the director's office are located in GW's Arlington Graduate Center: <https://cps.gwu.edu/arlington>. (Washington, DC has placed a population camp on GW's Foggy Bottom campus so, as the university grows, it is forced to grow outside of Individual classrooms are wired, and the facilities has both Mac and PC laboratories, See photograms in Appendix IVC 1-F.

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- E. Information and technology: Students, faculty and staff shall have access to sufficient information systems and technology, and technical equipment to achieve the Program's mission and objectives. Information and technology include, but are not limited to, maintained computer hardware, software and access, library resources and collections.
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All SUP facilities, including classrooms, computer labs, and the director's office are located in GW's Arlington Graduate Center: <https://cps.gwu.edu/arlington>. (Washington, DC has placed a population camp on GW's Foggy Bottom campus so, as the university grows, it is forced to grow outside of Individual classrooms are wired, and the facilities has both Mac and PC laboratories,

See photograms in Appendix IVC 1-F. Among other resources, SUP maintains site licenses for: ArcGIS and all available extensions; Stata; EViews, an econometrics program; and, starting in September, Erdas IMAGINE, software for remote sensing and image analysis.

STANDARD #5 - GOVERNANCE

The Program shall make administrative decisions through a governance process that exhibits a high degree of transparency, inclusiveness, and autonomy. The Program shall be located within an identifiable and distinct academic unit, such as a Department or School of planning, and the Program's faculty shall be clearly identifiable as such. The Program shall involve faculty and students, as appropriate, in administrative decisions that affect them and shall demonstrate that those decisions serve to implement the Program's strategic plan.

As mentioned in Part II, under the Program History, higher education has indisputably entered a new era, and units of all kinds—at private and public universities alike—face difficult challenges in delivering high-quality academics efficiently and cost effectively. While it is beyond the scope of the SSR to explain these systematic, industry-wide problems in detail, it is necessary to provide an overview. The nature of the problem is sketched in the slides contained in Appendix IVC 6-B. The first is a slide used in a recent GW College of Professional Studies (CPS) retreat. The slide documents that the volume of student loan debt has crippled over the past ~10 years, no \$1.2 trillion—a number that sabot 7% of the U.S. GDP. The slide also shows that revenue growth within master's degree programs at private universities has slowed from 3.3% annually to just 0.5% annually; 43% of private institutions have faced declining revenue since 2008. The quote at the bottom of the slide expresses the extent of these shifts and urgency with which universities must find ways of responding to them. The second is a slide pertaining to the cost of, and demand for, undergraduate education nationally at both public and private institutions. While SUP is not explicitly a part of this picture because it is a graduate program, the point is the same: higher education faces a systemic problem wherein revenues to support programs are increasingly scarce and the financial landscape—nationwide—is increasingly difficult. This is the environment that SUP was born into and, therefore, has been engineered to operate within, but it does mean doing things differently.

One way that GW has responded is by launching CPS, a school whose mission it is to serve working professionals in the Washington, DC region. As described in the CPS strategic plan: Founded in 2001, the College of Professional Studies has grown to include more than 20 programs and serve more than 1,000 students a year. With an unfettered potential for ideas and a creative spirit shared by faculty and staff, it is known for curricular innovation. Relying upon adjunct faculty expertise that brings a practical collaborative mindset to course and program development, CPS is flexible and agile in responding to educational and professional demands. With a combination of classroom, online, and hybrid offerings it meets the needs of an expanding student population, providing links between professional communities and new generations of leaders. CPS focuses on career development, maintaining close ties with clients and markets as well as building an alumni network for long-term professional support. The location of its programs and diversity of its campus and online offerings meet student needs and provide flexibility for future program development.

Thus, SUP, like all programs within CPS, this means operates on a low-overhead business model with three characteristics that diverge from the PAB's guidelines. In particular, the program: (i) employs a single full-time faculty member, who teaches in the program and serves as director; (ii) offers no tenure, including to the program director; and (iii) is composed of adjunct faculty who are based at organizations external to the university. To be clear, these differences are not unique to SUP: they are very much part of GW's structure and apply every program within CPS. Most important, the fact is that they are differences in mode of operation—not differences in substance.

As well, the program operates within the well-organized structure of CPS which has more than 20 programs organized in a similar manner. In particular, the SUP director works in close collaboration with the CPS administration, especially the Associate Dean for Learning and Faculty Development, the Associate Dean for Academic Excellence, and the Assistant Dean of Students. (See the CPS organization chart presented in Part II; CVs for the individuals occupying these positions are contained in Appendix IVC 5-B.) Compared to those of more traditional colleges, the associate and assistant deans of CPS are less administrative and more operational. For example, the Associate Dean for Learning and Faculty Development is responsible for a wide array of duties that strengthen CPS's mission of educating working professionals:

- Curricular oversight of all programs and courses for pedagogical soundness and consistency;
- Review of all program and course learning outcomes for accreditation purposes;
- Training and support of all faculty for teaching effectiveness;
- Creation and delivery of pedagogical materials and workshops to support faculty development;
- Creation of online programs and courses, working closely with Program Directors and faculty and supported by a staff of instructional designers and videographers;
- Advising faculty confronting instructional and student problems, including academic integrity violations;
- Review of all full-time faculty University annual reports; and
- Representing CPS in University committees on teaching and learning issues, including online education.

Similarly, the Assistant Dean for Student Services is heavily involved in SUP operations. The Assistant Dean's portfolio includes:

- Addressing student administrative academic issues (leaves of absences, academic exception petitions, registration);
- Advising students and support program directors regarding student issues such as academic integrity, personal issues, difficult classroom dynamics, disabilities;
- Helping program directors think through the structure and schedule of coursework overall and specifically each semester;
- Advise program directors as to university administrative and substantive policy as they apply to students (Clery Act disclosures, discrimination allegations, academic

dishonesty, satisfactory academic progress for federal financial aid, minimum enrollment, incomplete grades, leaves of absence); and

- Drafting proposed CPS policies to complement university regulations.
The Assistant Dean of Students also oversees an intensive Career Services Program for CPS:
- Career services office dedicated to CPS students and alumni (based on anecdotal evidence from UPCEA conferences, few professional studies schools have a dedicated career office), a critical function because GW's main career office not set up to work with more mature, professional students who currently have careers;
- Career services include resume and cover letter review, interview coaching, networking strategies, site visits and panel discussions, gathering of career outcome data, creation of online resources specific to SUP field. One-on-one counseling appointments plus group site visits and programming.
- Administrative Student Services acts as liaison with university re: registration issues so student does not have to navigate large GW system alone. Cpserveu@gwu.edu has been a successful means of communication with students with excellent response times - try to get as close to "one-stop-shopping" model as possible. Student Services also runs commencement activities specifically for CPS, as well as graduation clearances.

The Associate Dean for Academic Excellence is, among other things, engaged in all programmatic planning, including changes to the curriculum the development of new courses and/or concentrations. The associate dean works closely with the director of SUP and is directly involved in the day-to-day operations of the program.

Finally, beyond CPS, SUP fits within GW as a key component of the Sustainability Collaborative, a horizontally-organized superstructure—situated in the office of the provost—that collects and focuses GW's research, academic, operational, and public engagement activities in sustainability under a single umbrella. Sustainability is one of GW's nine core values and the Sustainability Collaborative has established GW as a proven leader in sustainability and SUP has been—and will continue to be—an active contributor to the effort. A letter from Dr. Kathleen Merrigan, Executive Director of Sustainability, on SUP's alignment with and importance to GW as a whole is included in Appendix IVC 1-B.

CRITERIA

- A. Program autonomy: In accordance with customary university procedures, the planning faculty shall have responsibility for the design of its curriculum and shall have an independent voice in the appointment, promotion, tenure, and evaluation of its faculty, and the admission and evaluation of its students.

GUIDELINES

1. The planning Program will normally be headed by its own administrator, who will report directly to a dean or an equivalent academic official.
2. In administrative units with multiple degree programs, however, the planning Program shall function as an independent entity with respect to most if not all administrative responsibilities.

The challenge for SUP since the beginning has been to develop a business and model that capitalizes on the dynamism of CPS in order to meet the very high standards of GW and, ultimately, the demands of national and international job markets. As SUP has matured, it has excelled through the CPS framework and achieved a level of success commensurate with the expectations of GW. One benefit of the CPS model is that its programs operate with great autonomy and the program director is empowered to take a wide range of actions on behalf of SUP. That said, like every academic unit on campus, SUP is very much part of the GW hierarchy.

Like most universities, GW organized in a corporate-style hierarchical structure. In the case of SUP there is the university itself, governed by the board of trustees, under which are the offices of the president, provost, and college deans. This hierarchy is displayed in leftmost part of the figure contained in Appendix IVC 5-C (which is identical to Figure 2 from the strategic plan) which places the director of SUP in a linear chain of command directly accountable to the CPS dean and higher offices—this is the same organization shown in Part II of this report. The director serves as the chief operating officer of SUP, who remains accountable to the institution and must make decisions that are both subject to the GW hierarchy and responsive to the day-to-day needs of the program. The main part of the figure illustrates that the organization of SUP itself is not hierarchical. Rather, it is a community of scholarship that circulates around four anchors, composed of the: director; faculty; students; and alumni. While the SUP director is obviously part of the GW chain of command, the individual engages—subject to the responsibilities and constraints of the office—with the program in a collaborative manner. Communication, or the flow of ideas, happens around the periphery of the circle while influence, or say over what SUP is, happens toward the center of the circle.

The SUP paradigm differs from the familiar hierarchical structure in the important sense that, within institutional constraints, the director engages not only in an administrative capacity, but as a collaborator among faculty, students, and alumni—all of whom contribute to making the program what it is. Faculty meet regularly and the students and alumni, who are organized, respectively, via an elected government and an appointed board have seats at those meetings. The Sustainable Urban Planning Student Organization, or SUPSO, was chartered in March 2012 and annually elects board members. The government is, among other things, a venue for democratically communicating the will of the student body—ranging from new initiatives to grievances. The initial alumni board was appointed by the director in December 2015 with three members representing the master’s degree and a member representing each of the two certificates. The board is a focal point for alumni engagement and responsible for advising the director—and other constituents—on legacy decisions for the program. This governance model and its strengths and weaknesses are detailed the SUP Strategic Plan.

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- B. Program leadership: The administrator of the degree Program shall be a planner whose leadership and management skills, combined with education and experience in planning, enables the Program to achieve its goals and objectives. The administrator shall be a tenured faculty member with an academic rank of associate professor or higher.
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The current—and founding—director of SUP is John Carruthers, an urban planner who holds a bachelor’s, master’s, and doctorate in the field. Dr. Carruthers, whose complete CV is

contained in Appendix IVC 3-B, is a nationally and internationally recognized scholar in the urban planning and the allied field of regional science. (Regional science is an interdisciplinary field that includes urban planners, economists, geographers, civil and environmental engineers, and others.) Dr. Carruthers has authored or co-authored 25 journal articles; numerous book chapters; edited a book on environmental quality, plus several special issues of journals; and has two book manuscripts and several working papers and other projects underway. According to Google Scholar, as shown in Appendix IVC 3-A, his research has been cited more than 1,500 times, and his h-index is 18. In addition to his own scholarship, Dr. Carruthers is on the editorial boards of several leading journals, including the Journal of the American Planning Association. A recent article published by Rickman and Winters (2016) in the planning-oriented journal Growth and Change, contained in Appendix IVC 3-C, ranks Dr. Carruthers 24th globally in terms of research productivity among regional scientists. During the past (2015 - 2016) academic year, Dr. Carruthers developed and managed sponsored projects—from the Korea Development Institute, World Bank Group, and United States Department of Energy—totaling approximately \$125,000.

In addition to his scholarship, Dr. Carruthers has served as an elected member of the RSAI (Regional Science Association International) Council and the North American Regional Science Council; he is a member of the Board of the Western Regional Science Association. He is regularly involved in scientific meetings—often as an organizer—including the meetings of the Associated Collegiate Schools of Planning. He also speaks to applied forums, including (to name some examples) the Federal Reserve Bank of Chicago, SAMOO Architects, the Korean Research Institute on Human Settlements, and the Bangladesh Urban Forum. This fall, Dr. Carruthers will be advising the Department of Energy’s National Nuclear Safety Administration on sustainable development and critical infrastructure planning on its eight sites, including Los Alamos. His professional network and connections to the field are dense within the Washington, DC region’s rich set of leading national and international planning and policy organizations—and extend across the United States and beyond. Dr. Carruthers is an adjunct faculty in Yonsei University’s (Yonsei is one of Korea’s three top SKY universities) Department of Urban Planning and Engineering, where he regularly takes SUP students and serves as a reviewer for internal promotion processes.

While Dr. Carruthers has been connected to academia for his entire professional career—he has held faculty appointments at the University of Arizona, the University of Washington, and the University of Maryland—he also has extensive private sector experience, plus experience working in the defeat government. Dr. Carruthers was the Director of Research for Greenfield Advisors where he helped develop the firm’s practice of using econometric methods to evaluate environmentally contaminated real estate and estimate damages associated with public sector takings. During his time—just prior to joining GW—serving as an Economist in the U.S. Department of Housing and Urban Development’s (HUD) Office of Policy Development and Research, Dr. Carruthers was responsible for: developing and maintaining a scientific research program relevant to HUD’s mission and objectives; conducting regulatory impact analyses; and providing research support for various policy initiatives, including immigration and housing finance reform. While at HUD, Dr. Carruthers taught an urban economics class for the University of Maryland’s

This distinguished record of experience inside and outside of academia is what enabled GW to hire Dr. Carruthers to build and implement SUP: the directorship requires business skills,

academic savvy, a strong research profile, extensive ties to the planning profession, and so on. It also requires deep knowledge of the particulars of a graduate education in urban planning. During the interview process (in fall 2010) Dr. Carruthers outlined PAB standards and criteria and set out a concrete strategy—which has been carefully developed and followed—for attaining PAB accreditation. From the beginning Dr. Carruthers has been cognizant of the fact that the non-traditional model of CPS does not conform to PAB’s guidelines, so strict attention has been paid to meeting those standards in practice, if not in letter. (Communication between SUP and PAB dates to July 2011.) Through sound leadership that is attuned to the planning academy and profession, these differences have been made to be pro forma differences or, in other words, differences in mode of operation—not differences in substance. It is absolutely essential that the leader of SUP have this mix of skills and experience.

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- C. Communication: The Program shall use a variety of media to provide effective two-way communication with current and prospective students, faculty, alumni, employers, professional associations, practitioners, and other stakeholders about the Program’s goals and objectives and about its progress toward achieving those aims. The administrator of the Program shall be regularly accessible to these stakeholders, providing them with suitable opportunities for interaction.
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The Sustainable Urban Planning Program maintains several forums for communication and interaction. The program has a well-developed website (<https://cps.gwu.edu/sustainable-urban-planning>) that is implemented in English, Chinese, Korean, and Spanish. The website explains the program and hosts its strategic plan. There is a program maintains a list serve that enables students, faculty, and other members to communicate freely and distribute job announcements and other material. The program also has an active Facebook group (<https://www.facebook.com/groups/1562836310657983/>) which has about 175 members—including faculty from around the globe—all of whom are free to post. The director uses the feed to highlight program activities and showcase student success. It is also a forum to discuss news of interest to the SUP community and disseminate word of events. The program regularly hosts major networking events in the form of research symposiums that bring faculty from other universities and/or practitioners from innovative organizations to GW. These events are free and open to the public. They generally attract 80 - 120 people and are forums for introducing SUP and its students to the profession, and other stakeholders. Fliers announcing these symposiums are contained in Appendix IVC 1-C. Finally, the program hosts information sessions, led by the director, 10 or more times per year for prospective students and other interested parties and CPS staff regularly represent SUP at trade shows, conferences, and other events. A flier advertising SUP is contained in Appendix IVC 1-G.

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- D. Faculty and student participation: The Program shall provide faculty, individual students, student organizations, and other interested parties with opportunities to participate fully and meaningfully in administrative decisions that affect them. To the extent that these interested parties might raise substantive issues from time to time, the Program shall demonstrate that it has responded appropriately to those issues, and communicated the outcomes in such a fashion that the interested parties understand how the decisions were made.
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As shown in Figure 5.2 (and explained above) SUP operates as a community of scholarship that circulates around four anchors, composed of the: director; faculty; students; and alumni. The SUP governance structure—or paradigm, to use the word of the strategic plan—differs from the familiar hierarchical structure of an academic department in the important sense that, within institutional constraints, the director engages not only in an administrative capacity, but as a collaborator among faculty, students, and alumni—all of whom contribute to making the program what it is. Faculty meet regularly and the students and alumni, who are organized, respectively, via an elected government and an appointed board have seats at those meetings. The Sustainable Urban Planning Student Organization, or SUPSO, was chartered in March 2012 and annually elects board members. The government is, among other things, a venue for democratically communicating the will of the student body—ranging from new initiatives (like the new concentration that is being developed) to grievances. The initial alumni board was appointed by the director in December 2015 with three members representing the master’s degree and a member representing each of the two certificates. The board is a focal point for alumni engagement and responsible for advising the director—and other constituents—on legacy decisions for the program. As well, the program is in the process of identifying prospective members of a professional advisory board with the goal of forming the board in January 2017 once/if SUP gains candidacy for accreditation. This governance model, how it is practiced, and its strengths and weaknesses are detailed the SUP Strategic Plan.

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- E. Promotion and tenure: The Program shall publish policies and procedures for making decisions about the promotion and tenure of faculty, and shall provide junior faculty with the support that they need to advance professionally within the Program. The Program shall provide mentorship opportunities for all junior faculty, including women, racial and ethnic minorities, and members of other under-represented groups.
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Like all programs within the College of Professional Studies, SUP: (i) employees a single full-time faculty member, who teaches in the program and serves as director; (ii) offers no tenure, including to the program director; and (iii) is composed of adjunct faculty who are based at organizations external to the university. To be clear, these differences are not unique to the Sustainable Urban Planning Program: they are very much part of the George Washington University’s structure and apply every program within the College of Professional Studies. As explained under Standard 3, all SUP faculty (apart from the director) are adjunct faculty based external to GW. Faculty are recruited on the basis of their expertise and ability to commit to SUP

long-term (indefinitely) plus their ability to teach at least one and in most cases two classes annually. GW's adjunct faculty are unionized (see: <https://facultyaffairs.gwu.edu/part-time-faculty>) under a collective bargaining agreement that grants them the right of first refusal after they have taught their class three times. This means that SUP faculty are effectively tenured into their classes. The agreement also provides funding for professional development and travel (<https://facultyaffairs.gwu.edu/part-time-faculty-professional-development-fund-ptf.pdf>).

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- F. Grievance procedures: The Program shall publish policies and procedures for resolving student and faculty grievances, and shall appropriately disseminate such policies and procedures to students and faculty. The Program shall maintain records to document the number and kinds of grievances it has received and the manner in which it has resolved those grievances.
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SUP takes grievance procedures seriously. Grievances may be communicated to the director; through the SUPSO, the student government; and/or through the Assistant Dean of Students. CPS and GW (at large) also have well established channels and mechanisms for communicating grievances—whether from students or faculty. SUPSO has a seat at all faculty meetings and the director is responsive to any and all communications from the government. On the program side, the director of SUP works regularly with the Assistant Dean of Students to ensure that problems—academic or otherwise—are handled efficiently and fairly. The culture of SUP is one of personal and organizational empowerment, so students and faculty alike are encouraged to communicate openly and freely, without prejudice. At times, the program has faced difficulties—for example, with plagiarism; when students' personal lives collide with their academic lives; and so on—and the program has established an excellent record of handling matters effectively in the best way for all concerned. Especially important is the SUPSO student engagement survey. SUPSO, the SUP student government regularly conducts its own independent evaluation of the SUP curriculum, known as the SUPSO student engagement survey. The results of that survey—which was developed and issued by SUPSO, with no faculty involvement—for the 2012 - 2013, 2013 - 2014, and 2014 - 2015 academic years are provided unedited in Appendix IVC 7-A. (SUPSO did not conduct a survey for the 2015 - 2016 academic year.) Though not a grievance, per se, the SUP director was recently compelled to file a CARE report (<https://students.gwu.edu/care>) out of concern for an SUP student's mental health and wellbeing. The text of that report (in the form of an email receipt) is contained in Appendix IVC 8-D.

STANDARD #6 – PROGRAM ASSESSMENT

The Program, or the Department in which it resides, shall have a clearly defined approach, methodology, and indicators for measuring the Program's success in achieving the goals it articulated in its Mission and Strategic Plan. Specifically, performance indicators and their results shall be reported at each accreditation review in the areas listed below, and in areas not listed below that are contained within program goals.

The George Washington University is accredited by the Middle States Commission on Higher Education (<https://www.msche.org>) and follows strict program assessment procedures. Appendix IVC 6-C contains the manual describing annual assessment procedures. A snapshot of a recent annual assessment—following these procedures—of an individual student’s learning outcomes is provided in Appendix IVC 6-E. Appendix IVC 6-D provides details of GW’s policies and procedures for completing an APR, or academic program review. This process includes a self-study report similar to this one and must be completed every five years. Because SUP has just closed its fifth year, it has not yet completed its APR. In fact, that process will commence this August/September immediately after the present SSR has been successfully completed and delivered to PAB. By the time of a site visit—if granted candidacy status—SUP expects to have on hand a fully completed APR.

CRITERIA:

A. Faculty research/scholarly contributions to the profession: The Program shall provide evidence of faculty contributions to the advancement of the profession through research (theoretical and applied) and scholarship.

The SUP program resides with the College of Professional Studies (CPS) at George Washington University. Faculty are required to maintain research and scholarly publications and pursuits and report this activity annually to the Program Director who will in turn augment the template displayed in Table 3.E. of this report.

B. Student learning and achievement: The Program shall report clear indicators of student success in learning the Core Knowledge, Skills, and Values of the profession. Such evidence should clearly identify the learning outcomes sought and achieved for students at either cohort or year level over the accreditation review period.

A detailed breakdown of every course ever offered by SUP in the main—that is, not including cross listed courses from the Sustainable Landscape concentration and—is provided in Appendix IVC 4-A. (Note that, for the sake of consistency, the tables in Appendix IVC 4-A all use current course numbers and titles, which have evolved and been modified somewhat since 2014.) The bottommost tabulations show that the mean class size across all courses is 10.1 students; when classroom classes only (that is, setting aside the self-paced capstone practicum, and independent study courses—the mean class size is 10.51 students. An example of a recent annual assessment of an individual student’s learning outcomes is provided in Appendix IVC 6-E.

C. Student retention and graduation rates: The Program shall report student retention and graduation rates (including number of degrees produced each year) relative to program enrollment and to targets set by the Program.

Table 6.C.1. STUDENT RETENTION RATES

<u>Academic Year</u>		<u>2011-2012</u>	<u>2012-2013</u>	<u>2013-2014</u>	<u>2014-2015</u>	<u>2015-2016</u>	<u>2016-2017</u>
<u>Retention Rate*</u>	<u>Fulltime</u>	16/16 = 100%	7/7 = 100%	3/7 = 43%	9/10 = 90%	6/7 = 86%	n/a
	<u>Part-time</u>	3/6 = 50%	1/2 = 50%	3/5 = 60%	1/1 = 100%	8/8 = 100%	n/a

According to data from GW’s Office of Institutional Research and Planning, a grand total of 83 students (including full and part time, and counting those expected to enter fall, 2016) have entered the SUP. Analysis of these numbers indicate that of the 18 who were not retained by the program five left with graduate certificates; in addition, one individual is in the process of petitioning to return in order to complete their degree. During the 2012 – 2014 timeframe, the program experienced difficulty as a result of a holistic restructuring of CPS’s marketing department and a reworking of the manner in which the college attracts new students. Since then, SUP has experience renewed growth in both the number and quality of students. The following table illustrates that SUP has an excellent record of graduating students in a timely manner. A table listing all students with “1s” marking semesters in which they were enrolled is contained in Appendix IVC 6-F.

*Retention rate is calculated for graduate students as the percentage of first-year students who return in the 2nd year. Retention rate is calculated for undergraduate students as the percentage of students enrolled one year after declaring their major, excluding those who graduated.

Table 6.C.2. GRADUATE STUDENT GRADUATION RATES

<u>Academic Year</u>		<u>2011-2012</u>	<u>2012-2013</u>	<u>2013-2014</u>	<u>2014-2015</u>	<u>2015-2016</u>	<u>2016-2017</u>
<u># New Students Admitted who Enrolled*</u>	<u>Fulltime</u>	16	7	7	10	7	11
	<u>Part-time</u>	6	2	5	1	8	2
<u>Graduation Rates</u>							
<u>Graduation Rate 2-year</u>	<u>Fulltime</u>		0/16 = 0%	2/7 = 29%	1/7 = 15%	1/7 = 14%	n/a
	<u>Part-time</u>		0/6 = 0%	0/2 = 0%	0/3 = 0%	1/0 = 0%	n/a
<u>Graduation Rate 3-year</u>	<u>Fulltime</u>			11/16 = 69%	7/7 = 100%	2/7 = 30%	n/a
	<u>Part-time</u>			0/6 = 0%	0/2 = 0%	0/3 = 0%	n/a
<u>Graduation Rate 4-year</u>	<u>Fulltime</u>				16/16 = 100%	7/7 = 100%	n/a
	<u>Part-time</u>				0/6 = 0%	0/2 = 0%	n/a

Fulltime, part-time and dual degree status are identified with the initial cohort being tracked. Graduation is counted as of the end of the academic year. For example, students in the fall 2002-03 new student cohort who graduate by the end of the 2003-04 year (as late as summer term 2004) are considered 2-year graduates.

Table 6.C.3. NUMBER OF DEGREES AWARDED

<u>Academic Year</u>	<u>January 2014</u>	<u>May 2014</u>	<u>August 2014</u>	<u>January 2015</u>	<u>May 2015</u>	<u>August 2015</u>	<u>January 2016</u>
<u>Degrees Awarded</u>	<u>7</u>	<u>6</u>	<u>1</u>	<u>6</u>	<u>3</u>	<u>1</u>	<u>1</u>

D. Outcomes: The Program shall report student achievement and success after graduation in at least the areas specified below:

Having just closed its fifth academic year, SUP is a very young program. Its first MPS degrees were conferred in January 2014 meaning that the program’s “oldest” graduates have only been out of school for 30 months. Although SUP alumni are achieving tremendous success—see Appendix IVC 2-B—the history of the program is not long enough for it to have documented substantive

trends in satisfaction, professional growth, AICP certification, and/or service to the profession and community.

1. Graduate satisfaction: The Program shall document the percentage of graduates who, two to five years after graduation, report being satisfied or highly satisfied with how the Program prepared them for their current employment.

Because SUP is such a new program it has not yet had the opportunity to conduct such a survey. However, video testimonials of three graduates are provided (please follow the links, which lead to videos on YouTube, in Appendix IVC 6-G). As well, feedback from the student body is contained in the SUPSO student engagement survey, contained in Appendix IVC 7-A. Many, if not most of the respondents to those surveys have since graduated.

2. Graduate Employment: The Program shall document the percentage of graduates who secure employment within one year of graduation in professional planning, planning-related, or other positions, and the definitions thereof.

A list of positions occupied by the 25 MPS SUP alumni is provided in Appendix IVC 2-B. Note that this list also includes alumni of certificate programs and a few of these individuals are in the MPS program—that is, they applied for the certificate as they progressed through the MPS program.

Graduation Years Ending		January 2014	May 2014	August 2014	January 2015	May 2015	August 2015	January 2016
Graduates employed within 1 year of graduation in a professional planning or planning-related job	Number	5	6		4	3	1	
	Percent	71%	100%		67%	100%	100%	
	Percent							
Graduates who pursue further education within 1 year of graduation.	Number	-						1
	Percent	-						100%
Graduates not employed in planning or planning-related jobs or unemployed within 1 year of graduation	Number	2			2			
	Percent	29%			20%			
	Percent							
Graduates with unknown employment status	Number			1				
	Percent			100%				
Total	Number	7	6	1	6	3	1	1
	Percent	100%	100%	100%	100%	100%	100%	100%

NB: Individuals “not employed in planning” include the following positions: Senior Tax Manager at Public Accounting Firm; Assistant Director of Business Development at Kellogg School of Management, Northwestern University; Air

Advisor at U.S. Air Force; and Partnership Manager at Island Press. The accountant is an individual who took a break from her career to pursue planning as a matter of interest. The other three are people who apply their planning education in their respective institutions, including Island Press, a leading publisher of books on planning, sustainability, and other environmental issues. See Appendix IVC 2-B for further details on SUP alumni, including positions held by graduates of the certificate programs.

3. Graduate certification: The Program shall document the percentage of master’s graduates who pass the AICP exam within 3 years of graduation, and/or the percentage of bachelor’s graduates who pass the AICP exam within 5 years of graduation. If the Program believes that alternative credentials are meaningful to its goals and objectives, the Program may supplement its AICP data.

Because SUP is such a young program, most of its graduates not yet had the opportunity to take the AICP exam to date. Since the program is not currently accredited, a minimum of three years (full-time) of professional experience is required in conjunction with graduation. Therefore, assuming planning-related experience is gained after graduation, the first SUP MPS graduates would not be available to sit for the AICP exam until 2017.

One graduate of SUP has taken and passed the AICP exam, but that person—who sits on the alumni board—is a graduate of a certificate program, not the MPS program.

4. Graduate service to community and profession: The Program shall provide evidence of graduates’ contributions to meeting community needs and to providing service to the planning profession, such evidence obtained between 2 and 5 years after graduation.

Because SUP is such a young program, most of its graduates not yet had the opportunity to document service to the profession and community.

5. Other outcome(s) identified by the Program: The Program shall identify, target, and report results for one or more additional outcomes related to program goals not already identified above.

As explained in SUP’s strategic plan, the mission of the program is to train the next generation of leaders in the field of urban planning. Specifically, the program makes the triple bottom line of economic, social, and environmental sustainability the focus of urban planning in order to achieve competitive, inclusive, and ecological cities. The Sustainable Urban Planning Program—which awards a master’s degree, plus two graduate certificates—meets its objectives by graduating practitioners who work in sustainable development, both nationally and internationally. In doing so, SUP aims to significantly expand the reach of the planning profession by placing its students and alumni in positions traditionally dominated by practitioners of the natural and social sciences. Above all, SUP seeks to be known for its primacy in climate change adaptation and mitigation—by training planners to address the consequences of global warming. The impact of SUP is measured by its success in elevating the field of urban planning as a force

for addressing the problems that humanity must face in the oncoming future of anthropogenic climate change.

In fulfilling its mission, one of SUP's key ambitions is to widen the boundaries of the profession by driving the practice of urban planning deeper into the arena of sustainable development. SUP is extremely proud of the fact that its graduates are urban planners through and through. As shown in Appendix IVC 2-B, many SUP graduates are working in traditional planning positions. However, this appendix also shows that, in just a few short years, SUP has begun making progress its goal of helping to widen the boundaries of the planning profession: a good number of its graduates are taking urban planning into the arena of sustainable development.

STANDARD #7 - PROGRESS

The key elements of an outcomes-based assessment plan include making decisions about programmatic changes based on analyzing the outcomes data collected, and by connecting the changes made to long-term objectives, including those objectives that aim towards excellence.

The George Washington University is accredited by the Middle States Commission on Higher Education (<https://www.msche.org>) and follows strict program assessment procedures. Appendix IVC 6-C contains the manual describing annual assessment procedures. A snapshot of a recent annual assessment—following these procedures—of an individual student's learning outcomes is provided in Appendix IVC 6-E. Appendix IVC 6-D provides details of GW's policies and procedures for completing an APR, or academic program review. This process includes a self-study report similar to this one and must be completed every five years. Because SUP has just closed its fifth year, it has not yet completed its APR. In fact, that process will commence this August/September immediately after the present SSR has been successfully completed and delivered to PAB. By the time of a site visit—if granted candidacy status—SUP expects to have on hand a fully completed APR.

CRITERIA

A. Progress towards goal attainment: The Program shall demonstrate its progress since the last accreditation review in meeting program goals and objectives as measured by performance on the outcomes identified in Standard 6.

Appendix IVC 6-D provides details of GW's policies and procedures for completing an APR, or academic program review. This process includes a self-study report similar to this one and must be completed every five years. Because SUP has just closed its fifth year, it has not yet completed its APR. In fact, that process will commence this August/September immediately after the present SSR has been successfully completed and delivered to PAB. By the time of a site visit—if granted candidacy status—SUP expects to have on hand a fully completed APR.

B. Programmatic changes: The Program shall document programmatic changes recently completed or currently underway to advance the outcomes identified in Standard 6.

Work has commenced on developing the new concentration and reconfiguring the existing concentrations in a manner that makes room for the third and ensures that student choice is maximized without fragmenting the student body. A DRAFT working document, including the curriculum map presented above, is contained in Appendix IVC 1-D. This document is presented for expository purposes only, and is not final.) It is expected that new concentration will be approved no later than April 2017. PAB can expect to see this configuration of concentrations—or a configuration that closely resembles it—by the time a site visit team arrives to observe SUP.

C. Strategic issues for the next 5-7 years: The Program shall identify the critical steps needed to advance its goals and progress during the next reaccreditation period.

The five actions identified in this section emerged from the SWOT analysis and support SUP's core values. The first three are inexpensive, short- to intermediate-term objectives meant to help SUP better live up to its objectives. The last two are expensive, longer-term objectives that build out the program and are contingent upon attaining PAB accreditation, plus upward trends in enrollment, quality, and financial stability. With this in mind, SUP will move to take the following specific actions:

- Establish a travel assistance fund for SUP students who present their work at the national meetings of the American Planning Association (APA) or the Associated Collegiate Schools of Planning (ACSP). One of SUP's key ambitions is to widen the boundaries of the profession by driving the practice of urban planning deeper into the arena of sustainable development. The program can enhance this objective by encouraging its students to present their original ideas—that are the source of their success in the job market and profession—at the national meetings of the APA or ACSP. Toward this end, SUP will establish a fund yielding no less than \$2,000 to be competitively awarded to students whose work is accepted for presentation at these—or other relevant—meetings. This action supports the core values of active learning, research, and world engagement.
- Establish a committee to explore a new concentration focused on sustainable urbanization in Asia. Planning in the United States is, for the most, part done as a form of public policy by local governments acting under the aegis of state enabling legislation. In Asia, planning is done using different approaches and under different governance structures. While not explicitly an international development program, SUP is global in scope: most of the urbanization in the world is happening outside the nation and climate change is, by definition, a global problem. Moreover, SUP actively recruits students from Asia and, therefore, needs to immediately improve its capacity to serve Asian job markets. This action supports the core values of advocacy, democracy, diversity, and world engagement.
- Establish a professional advisory board no later than January 2017. The SUP paradigm is of a program that is collaboratively governed by the director, faculty, students, and alumni—all of whom are organized to contribute. Absent from the picture, is an external advisory board composed of members of the profession who are not otherwise engaged (for example, as faculty or alumni) in SUP. This missing piece is largely owed to the youth of SUP, but now that it has matured, a professional advisory board is necessary for the governance of the program. A professional advisory board is also necessary for enabling SUP to make the type of

institutional linkages that will enable the program to achieve its objective of entering the top tier of urban planning programs. Accordingly, SUP will immediately begin identifying potential members for a professional advisory board, with the goal of having the board in place by the onset of 2017. This action supports the core values of advocacy, democracy, and world engagement.

- Establish a second faculty full-time equivalent (FTE) within SUP. In order for SUP to grow significantly without adversely affecting quality, a second faculty FTE is required. The program director must be absolved of some of their existing responsibilities in order to effectively manage a larger student body—and, potentially, an expanded set of faculty. Sponsored research is needed and, eventually, fundraising efforts will be necessary as well. Accordingly, SUP will seek to establish a second faculty FTE as early as 2021, when the program will be ten years old. This action supports the core values of active learning, research, and world engagement. Clearly, the move will have large financial implications for SUP and will therefore be contingent on sustained upward trends in enrollment, quality, and financial stability.
- Establish merit-based scholarships for students from Least Developed Countries (LDCs). Diversity and world engagement are two of SUP's core values so, as the program grows, it must make a financial commitment toward those values. An impactful way of doing this is by encouraging leading students from LDCs—who would not otherwise have access to GW—to attend. Given SUP's emphasis on climate change and focus on Asia, a particular region to be targeted by this action is Southeast Asia.² This action supports the core values of advocacy, diversity, and world engagement. This move will have large financial implications for the program and will therefore be contingent on sustained upward trends in enrollment, quality, and financial stability.

Though not exhaustive, this set of actions captures the broad sentiment of the strategic planning sessions. Smaller actions also emerged and will be implemented as time and energy allow. While other large actions could certainly be added to the list, each of those included came up repeatedly and with much interest.

NB: The College of Professional Studies has prepared a financial analysis of this document. The cost of implementing the actions listed above is estimated at approximately \$300,000 annually: \$125,500 for the FTE and \$165,000—or \$82,500 each—for two full scholarships.

² Latin America and the Caribbean, and Sub-Saharan Africa are also important to this action.

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- D. Public Information: The Program shall routinely provide reliable information to the public on its performance. Such information shall appear in easily accessible locations including program websites. Information shall include, but not be limited to:
1. student achievement as determined by the Program;
 2. the cost (tuition and fees) for a full-time student for one academic year;
 3. student retention and graduation rates, including the number of degrees produced each year, the percentage of master's students graduating within 4 years and/or the percentage of bachelor's students graduating within 6 years;
 4. the percentage of master's graduates who pass the AICP exam within 3 years after graduation and/or the percentage of bachelor's graduates who pass the AICP exam within 5 years of graduation; and
 5. the employment rate of full-time graduates in a planning or planning-related job within 1 year of graduation.
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The official SUP website is: <http://cps.gwu.edu/sustainable-urban-planning>