PROGRAM PLANNING REPORT
SAN JOSE STATE UNIVERSITY

DEPARTMENT OF GEOGRAPHY AND GLOBAL STUDIES
GEOGRAPHY BA, MA, CERTIFICATE
COLLEGE OF SOCIAL SCIENCES
WWW.SJSU.EDU/GEOGRAPHY

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Date of Report:  March 27, 2015

Date Due to PPC:  Fall 2014

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Submissions:  Reports are to be submitted electronically via email. Please email the program plan, request for external reviewer (if applicable), and external reviewer’s report to programplanning@sjsu.edu. In addition, please cc the above email on all communications with the dean, external reviewer, Program Planning Committee, and UGS on matters pertaining to your program plan.
TABLE OF CONTENTS  <please indicate page numbers by each section>

1. PROGRAM DESCRIPTIONS
   a. Program Mission and Goals
   b. Curricular Content of Degrees, Minors, and Certificates
   c. Service Courses

2. SUMMARY OF PROGRESS, CHANGES, AND PROPOSED ACTIONS
   a. Progress on action plan of previous program review
   b. Significant changes to the program and context

3. ASSESSMENT OF STUDENT LEARNING
   a. Program Learning Objectives (PLO)
   b. Map of PLOs to University Learning Goals (ULG)
   c. Matrix of PLOs to Courses
   d. Assessment Data
   e. Assessment Results and Interpretation
   f. Placement of Graduates

4. PROGRAM METRICS AND REQUIRED DATA
   a. Enrollment, Retention, and Graduation rates
   b. Headcount in Sections
   c. FTES, Induced Load Matrix
   d. FTEF, SFR, Percentage T/TT Faculty

5. PROGRAM RESOURCES
   a. Faculty
   b. Support Staff
   c. Facilities

6. OTHER STRENGTHS, WEAKNESSES, OPPORTUNITIES AND CHALLENGES

7. DEPARTMENT ACTION PLAN

8. APPENDICES CONTENT
   a. Required Data Elements
   b. Accreditation Report (if applicable)
   c. (Example) Curriculum flow charts, and mappings
   d. (Example) Assessment rubrics
   e. (Example) Student success data summary
   f. Other (as determined by the program)
1. **PROGRAM DESCRIPTION**

The Geography program at San José State University (SJSU) is one of the oldest programs at this University with course offerings dating back to 1855, two years before the school’s official founding. Geography, as a formal discipline at SJSU, dates back to 1913 under the direction of Clara Hinze and Mary E Wilson. Ms. Hinze, who received her bachelor’s degree at UC, Berkeley and did graduate work at Stanford, taught Geography and led the program for 43 years. When Ms. Wilson retired in 1920, Ms. Hinze was the only geographer in the program until 1931. In 1941, Ms. Hinze was once again the lone geographer until the end of World War II when, in 1950, Dr. William Steele was hired. At least from 1950 on, the program was located in the Economics Department. But, after Dr. Steele was hired, the first degree in Geography was authorized and, in 1965, Geography separated from Economics and became an independent department. In 1957, Geography had moved into a new lecture hall designed for Geography, in Centennial Hall (now DMH). The department requested that the room be named Clara Hinze Hall, but the request was turned down by the administration.

By 1965, the faculty had grown to six full-time professors with 60 majors and 25 minors. In Fall 1965, the department filed a formal application to offer an MA degree. Geography was merged with the Environmental Studies Department two times during the period from 1970-1995. Unfortunately, due to personality (rather than pedagogical) issues, both times the Departments split apart. Most recently, the Global Studies program was merged with the Geography Department. Global Studies was evaluated in a separate program review. This document evaluates the Geography bachelor’s and master’s programs. This brief history is important as a reminder that, although there have been ups and downs, expansions and contractions, Geography has been an important part of San Jose State, both as a program and a department, for nearly 160 years.

Geography integrates perspectives on people, cultures, and the environment, thinking globally but acting locally. Geographers explore cutting edge issues such as urbanization, development, globalization, cultural integration and transformation, and environmental change. Geographers were among the first to call attention to human-induced changes in the environment and the need for cultural competency. Mapping, perhaps Geography’s best known tool, remains central to the field, but today uses the most advanced digital and analytical technologies. Geographers make important and positive contributions to their local communities and around the world, enjoying productive and satisfying careers and service.

Our increasingly complex world demands specialized skills, but also the ability to integrate information from a wide variety of sources. The Geography program at SJSU takes a highly integrated approach to education by coupling the study of people and the environment with the use of cutting edge tools such as digital mapping technologies, geographic information science and systems, and remote sensing. Our students explore the realities of contemporary globalization and global inequality. SJSU geography trains students to understand the human contexts of urbanization, sustainability, development, and environmental concerns. This approach produces graduates who understand the complexities of the world in which we live, and are valued by a wide range of employers as well as being prepared for graduate study in geography and related disciplines.
1a. Program mission and goals
Geography’s undergraduate program supports the university’s mission statement by providing high quality undergraduate and graduate education for the state and the region; promoting student learning, retention, and academic success; fostering community outreach through service activities; promoting instruction through the use of innovative teaching methods that require students to become actively involved in the learning process and develop the critical thinking skills necessary for life-long learning; contributing to the body of knowledge through completion of scholarly and creative activities; engaging and mentoring students in scholarly and creative endeavors; providing opportunities for students to use their knowledge, creativity, and critical thinking skills to make their communities better places in which to live; and prepare students to examine critically the many issues facing society and, through the process of civil discourse, prepare themselves to become socially responsible individuals who contribute to the betterment of society.

1b. Curricular Content of Degrees, Minors, Certificates, and Credentials
Geography at SJSU provides a broad and flexible program that explores the human and natural systems that shape the natural and built environments of the Earth. The discipline investigates the interaction of culture, society, and physical environments that characterize particular places and studies how these relationships vary across space. The Geography undergraduate program focuses on four interlocking sub-disciplines: human geography, physical geography, regional geography, and geospatial techniques and technologies. Human and Regional geography investigate the cultural, economic, and political processes that shape human experiences on the Earth; the relationship between the built and natural environment, society, and culture; and the nature of place in major world regions. Physical geography engages in a systematic study of the Earth’s physical environment (atmosphere, biosphere, hydrosphere, and lithosphere) and considers challenges associated with human impacts on the environment, natural resource management, and global environmental change. Geospatial techniques and technologies include the study of cartography, geographic information systems (GIS), and remote sensing science. The M.A. in Geography prepares students to work in a broad range of positions with federal, state, and local governments, environmental consulting firms, private management agencies, urban planning and development agencies, transportation agencies, and educational institutions. In addition, the department offers a GIS Certificate Program that enables students and community members to acquire technical and analytical skills, a minor in Geography, and a minor in GIS.

Students who study geography obtain a holistic understanding of the world and a set of methodological tools that can be applied to a wide range of domestic and international career opportunities. Geographers are involved in basic research at educational institutions and are also active in environmental planning, natural resource management, urban development, social policy development at all levels of government, private firms, non-profit organizations, and international agencies. A complex world demands specialized skills, but also the ability to integrate information. Geographers have the broad ability to link human and environmental, and technical skills in mapping, GIS, and remote sensing. Graduates find quality employment in public, private, and non-governmental sectors. According to the Bureau of Labor Statistics, employment of geographers will grow 26% by 2018, particularly for those with GIS skills. An increasing number of our BA graduates also find good placement in graduate programs.
The BA program is comprised of the following courses:

Preparation for the Major (3 units)
STAT 95

Core Courses (state how many units are required)
GEOG 001 Geography of Natural Environments (GE Area B1)
GEOG 10 Cultural Geography (GE Area D1)
GEOG 12 Global Geography (GE Area D2)
GEOG 100W Writing Workshop (SJSU Studies Area Z)
GEOG 135 Qualitative Methods in Geographical Research
GEOG 170 Introduction to Mapping and Geographic Information Systems
GEOG 186 Field Study in Physical Geography –OR –
GEOG 187 Field Study in Human and Historical Geography

Capstone (# of units)
Geog 199 Senior Seminar

Upper Division Breadth Requirements (# of units)
Human Geography (select 3)
GEOG 105 Urban Geography
GEOG 110 Urbanization in the Global South
GEOG 112 Nations, Cultures, and Territorial Disputes (SJSU Studies Area V)
GEOG 115 Geography of the Global Economy
GEOG 117 Advanced Economic Geography
GEOG 125 Selected Topics in Human Geography

Physical Geography (select 3)
GEOG 120 Food Supply and Agricultural Systems
GEOG 121 Population and Global Change (cross-listed with ENVS)
GEOG 124 Topics in Physical Geography
GEOG 130 Natural Resources
GEOG 165 National Parks (cross-listed with ENVS)

Geospatial Techniques and GIS (select 2)
GEOG 107 Mapping the World
GEOG 171 GIS and Map Analysis
GEOG 172 Cartography: Compilation and Presentation
GEOG 173 Cartography: Dynamic and Interactive Mapping
GEOG 175 Geographic Information Systems: Project Development
GEOG 181 Remote Sensing: Basic Theory and Image Interpretation
GEOG 182 Remote Sensing: Digital Analysis

Regional Synthesis (select 3)
GEOG 145 California
GEOG 150 Latin America and the Caribbean
GEOG 155 Europe
GEOG 160 East and South Asia
GEOG 168  Sub-Saharan Africa

*Geography Electives*

GEOG 178  Geographic Information Systems Project
GEOG 195  Spatial Analysis
GEOG 132  Creating Built Worlds (cross-listed with ANTH 132)

*Electives for Geography Majors planning to teach at the K-12 level (administered by Interdisciplinary Social Science) (12 units)*

GEOG 123  Geography for K-12 Teachers
GEOG 137  California in Historical and Social Science Perspectives
GEOG 138  United States in Historical and Social Science Perspectives
GEOG 139  The World in Historical and Social Science Perspectives

**The MA Program is 30 units, composed of the following courses:**

GEOG 239  Geographic Information Technology
GEOG 279  Geographic Information Science Applications
GEOG 282  Advanced Geographic Techniques
GEOG 286  Geographic Information Systems: Project Management
GEOG 290  Seminar in Research Design for Geographic Information Science
GEOG 298  Special Study
GEOG 299  Master’s Thesis or Project

*GEOG 239 through 290 may be repeated for credit when the topic is different.*

**Minor in Geography (15 units)**

GEOG 001  Geography of Natural Environments
GEOG 012  Global Geography
GEOG 170  Introduction to Mapping & Geographic Information Systems
Electives:  Select 6 units from one of the breadth areas

**Minor in Geographic Information Science (15 units)**

GEOG 170  Introduction to Mapping & Geographic Information Systems
GEOG 171  Map and GIS Analysis
GEOG 175  Geographic Information Systems: Project Development
Complete one sequence from:

*Cartography Sequence*

GEOG 172  Cartography: Compilation and Presentation
GEOG 173  Cartography: Dynamic and Interactive Mapping

*Remote Sensing Sequence*

GEOG 181  Remote Sensing: Basic Theory and Image Interpretation
GEOG 182  Remote Sensing: Digital Analysis
Certificate in Geographic Information Science (18 units)

Basic Courses (9 units)
GEOG 170 Introduction to Mapping & Geographic Information Systems
GEOG 171 Map and GIS Analysis
GEOG 175 Geographic Information Systems: Project Development

Electives (9 units)
GEOG 172 Cartography: Compilation and Presentation
GEOG 173 Cartography: Dynamic and Interactive Mapping
GEOG 181 Remote Sensing: Basic Theory and Image Interpretation
GEOG 182 Remote Sensing: Digital Analysis
GEOG 195 Spatial Analysis
GEOG 282 Advanced Geographic Techniques
GEOG 286 GIS: Project Management
GEOG 186 Field Study in Physical Geography or GEOG 187 Field Study in Human/Historical Geog.
URBP 179 Urban Geographic Information Systems
URBP 278 Geographic Information Systems Urban Applications

1c. Service Courses
The Geography program provides GE service to the university through offering the following Core GE and SJSU Studies courses:
GEOG 001 Geography of Natural Environments (Area B1)
GEOG 10 Cultural Geography (Area D1)
GEOG 12 Global Geography (Area D2)
GEOG 112 Nations, Cultures, Territorial Disputes (Area V)

2. SUMMARY OF PROGRESS, CHANGES, AND PROPOSED ACTIONS

2a. Progress on action plan of previous program review
The previous action plan was submitted in November 2001. There was no program plan written in 2006 or 2011. The 2001 Program Plan stated: “The Geography Department must improve its performance, particularly increasing the number of majors and upper-division enrollments. These improvements will translate into better educational outcomes for all of our students and increased faculty morale. Enrollments in our GE courses and courses serving other programs continue to provide the basis for department success, and provide the main mechanism to attract majors. However, the Department is clearly not doing enough. We must selectively modify our curriculum, work better at reaching potential students, develop new relationships within the region, and better assess the results of departmental efforts in these areas. We propose the following:

1. Expand our outreach to feeder institutions, both community college and high schools. This will include better connections to University outreach efforts, as well as preparing marketing materials that better describe the opportunities of modern Geography.

2. Improve our curriculum to give more detail to the emphases in international analysis and in urban analysis through collaboration with cognate departments. Further reform is also necessary in articulation of our offerings of Geographic Information Science with those courses in community colleges.
3. Encourage our faculty to pursue external funding of research and services. The goals are to provide improved faculty career development, give more applications of applied Geographic research to our advanced students, and develop an alternative to the traditional funding lost in the re-computation of Open University payments.

4. Improve our outreach to the growing [number] of commercial and public agencies that are actively implementing aspects of GIS in their operations.

5. Implement the recently prepared departmental assessment plan to better gauge our progress in the future.”

The 2001 program plan was not accessible to the faculty in the department after the chair at the time, David Helgren, retired in 2005. It was discovered in the Chair’s office in 2013 when clearing out old filing cabinets and stacks of papers. Even without knowing the report’s full contents until recently, the Department has made progress on many of the action plan items of the opening statement, particularly over the past 5 years. For example, new courses we have developed to improve our curriculum including Geog 135, 115, 121, 117, and 110 (see a full list in 2b, below). To improve outreach to non-university and community entities, in Spring 2015, assistant professor Dr. Kathrine Richardson was given assigned time, funded by the Mary Joe Endowment, for this outreach. We hope this effort will result in internship opportunities for our students, guest lecturers/instructors in the field of GIS, and financial partnerships to fund student and faculty research. Expanding outreach to feeder institutions and developing marketing materials that better describe opportunities of modern Geography have not been actively pursued, at least in part because of the very few permanent faculty members in the department. This is something we have been discussing and expect to enlist the aid of a student assistant in developing marketing materials for high school and community colleges. Department faculty has increasingly involved students in research projects here and abroad. Kathryn Davis brought both undergraduate and graduate students into research projects in Guatemala as well as into her research on the botanist, Ynes Mexia. Kathrine Richardson has actively involved graduate students in several of her research projects, such as the Japantown project and her research on Iranian American Business and Technology Leaders in Silicon Valley, and has acquired funding so some of their work was compensated. She also involves students in her classes in an ongoing research project with Japantown in San José, building important relationships within the community. Dr. Richardson is very successful at acquiring outside funding for her research. Graduate and undergraduate students were involved in an NSF fellowship that was a partnership with our department (Kathryn Davis and Richard Taketa), NASA, and Foothill Community College. Dr. Gary Pereira is the current graduate advisor. He has been instrumental in coordinating an annual symposium in which Geography students (both graduate and undergraduate) present their research projects.

2b. Significant changes to the program and context, if any
We have, especially over the past two years, made significant changes to the program. Since the 2001 program review the following new courses have been developed:

- GEOG 100W Writing Workshop
- GEOG 107 Mapping the World
- GEOG 110 Urbanization of the Global South
• GEOG 115 Geography of the Global Economy
• GEOG 117 Advanced Seminar in Economic Geography
• GEOG 121 Population and Global Change
• GEOG 124 Topics in Physical Geography
• GEOG 125 Topics in Human Geography
• GEOG 135 Qualitative Methods in Geographical Research
• GEOG 178 GIS Project

The following courses, on the books but not offered since 2001 have been revived, providing our students with a broader course offering than in the past decade or longer. Since the last review, the department has, at times, offered more GE than major courses. The same major courses have been offered too frequently, sometimes leaving students without enough options to fill out their schedule or meet the curricular requirements of the major. Part of the reason for this is not having enough active major courses, so reviving standing courses has helped us fill out our course offerings. In addition, one of the critiques students have offered in their capstone questionnaire is a lack of upper division physical geography courses. Two of the courses listed below respond to that critique. The department also stopped offering regional courses for several years, which was a disadvantage to students and reviving Geog 168 expands our regional offerings and provides students with a course on a region of growing importance in the world.

• GEOG 120 Food Supply and Agricultural Systems
• GEOG 130 Natural Resources
• GEOG 168 Sub-Saharan Africa

3. ASSESSMENT OF STUDENT LEARNING

3a. Program Learning Objectives (PLO)

PLOs for the B.A. degree in Geography have changed since the last program planning cycle. This decision was made for reasons that included: 1) previous PLOs were too detailed and, in some cases, repetitive; 2) PLOs had not been revised since the last cycle in 2002; 3) PLOs no longer met ULOs or the WASC PLO Rubric. The current PLOs are:

Graduates with a B.A. in Geography will:
1. Demonstrate understanding of and ability to analyze spatial relationships.
2. Demonstrate understanding of, and ability to analyze and critique human and environment interactions.
3. Define and use basic geography tools and techniques.
4. Demonstrate ability to analyze and compare/contrast global regions.
5. Demonstrate ability to read and understand research literature and engage in productive research activities.
6. Demonstrate professional communication skills.

PLOs for the M.A. program have not been changed, but as part of the planned major revision of the graduate program they will be evaluated and changed as appropriate. (See 5-year plan)
Graduates with an M.A. in Geography will:

1. Demonstrate the ability to critically evaluate and interpret published research on the theoretical foundations of geographical information science.
2. Demonstrate the ability to explain contemporary issues in geographic information science in the context of current theory.
3. Demonstrate the ability to define a research problem and design and execute a research program.
4. Demonstrate the ability to evaluate and interpret research results in the context of current theory.
5. Demonstrate the ability to communicate research results in written, graphic, and verbal form.
6. Demonstrate understanding of how geographic information science and technology may be applied to a variety of problems.

NOTE: We have not attempted to map the M.A. PLOs onto courses or to the ULOs because they are in the process of a complete revision at this time.

The department does not keep minutes of faculty or planning meetings. In the future, we will endeavor to do so.

In the context of the WASC PLO Rubric, the Geography program has, from 2001 to 2014 been “Emerging”. The last program review and plan was written in Fall 2001. We have, for the past 2 years, been working on understanding where we have been and developing a plan for where we want to go (See 5 year plan). This has been difficult because the last review was 13 years ago. We believe our current PLOs have moved from “Emerging” to “Developed”. Our goal is to achieve the “Highly Developed” stage before the next program review.

3b. Map of PLOs to University Learning Goals (ULG)
See attached Matrix

3c. Matrix of PLOs to Courses
See attached Matrix.

3d. Assessment Data
Direct assessment data is collected via an e-portfolio assignment students complete in GEOG 199, Senior Seminar. Assessment via e-portfolio has been difficult for both instructor and students because the PLOs developed over 10 years ago were too detailed and convoluted. When they were created there was no assessment tool created specifically to assess them and the assessment requirements were not as finely tuned and detailed as they are now. The last program review and plan was written in 2001 and was aligned with the requirements at the time. Over the past two years the current department chair and the instructor of GEOG 199 have evaluated the portfolios to the best of our ability given the issues of outdated PLOs lacking relevance to the current assessment environment. Moving forward, we have an assessment plan and calendar that will result in a larger faculty pool evaluating one PLO each academic year and the communication PLO every other year. This will result in all PLOs being evaluated during the 5-year period of the program planning and review cycle.
Student experience through indirect assessment is collected via personal reflection essay and completion of a survey form. (See attached instrument)

3e. Assessment Results and Interpretation
As mentioned above, we have had difficulty assessing portfolios, but have a plan in place for developing assessment based on WASC Rubrics for Portfolios. During Spring 2015 and Fall 2015 the faculty will collectively develop rubrics based on the WASC rubrics. With respect to the 2001 PLOs, students are generally achieving PLOs upon graduation with the exception of physical geography. We are expecting improvement over the past academic year as the department has revived and offered more upper division courses in this area of geography. The primary concern expressed by students in the survey was also the lack of physical geography offerings and we have begun working on making this more available at the upper division level to our students. This area will be evaluated during the 2015-16 assessment cycle after we have had the opportunity to evaluate portfolios and discuss possible changes or improvements in our ability to offer students physical geography courses. We do not have lab space for physical geography so our ability to offer courses requiring labs is limited. In addition, departments in the College of Science offer physical geography courses. For instance, geomorphology and advanced geomorphology are offered in the Geology department. Over the next cycle, the department should consider compiling a list of physical geography courses offered in other departments and offer them the option of taking those courses for credit in the physical geography thematic area. Students indicate in their surveys that the have had a generally positive academic experience in the program and at SJSU.

3f. Placement of Graduates
We have never administered an alumni survey and are only aware of where our graduates go when they keep in touch with us and informally provide this information. In the past 5 years, students have done this at an increasing rate. We have more students moving on to graduate programs than at any time in the past 20 years. Moving forward, we will track students who go into graduate programs so we have data to evaluate during the next self-study. To date, we know we have students working primarily in the GIS field at the City of San José, City of Los Angeles, USGS, Apple, Google, Men’s Wearhouse, Mid-Peninsula Open Space, and various start-up companies. We use an exit survey instrument in GEOG 199 to gather feedback on students’ perceived preparedness for the workforce, as well as reflections on curricular content. One of the most common reflections was that we did not offer enough upper division Geography major courses. Between 2006 and 2014, the department offered many more GE courses than major courses. One reason for this was the number of majors had dropped significantly and then began increasing again in 2013. In addition, the former CoSS Dean required a 20 student minimum for major courses to be offered, and we did not have enough majors to fill more than a limited number of major courses at that number. The current Interim Dean moved the cap back to the 15 required by the Provost and that has made a significant difference to our program. In Spring 2015, we have seven major’s courses being offered. This is also the first time in over a decade that we are offering three geospatial techniques courses in the same semester.

4. PROGRAM METRICS AND REQUIRED DATA
The Required Data Elements discussed in this section are attached in Appendix A of this report.
NOTE: Geography is a small program that receives majors primarily as transfer students in both Fall and Spring. The only data available on the IEA website is normally just for fall, which presents a skewed perception and does not allow for accurate analysis of our program. The department currently has 30 active majors, which isn’t reflected in the data because spring admits are not included.

4a. Enrollment, retention, graduation rates, and graduates

**Freshmen:** Freshmen entered the program in Fall 2000, 2002, 2010, and 2013. Geography gets most majors as transfer students. In Fall 2002 and 2010, there was one freshman and in Fall 2013 there were three. Retention rates were 100% except for the one student who started as a freshman in Fall 2010. One of the three freshman admits for Fall 2013 was a URM. Of the three who entered in 2006 and graduated with a Geography degree, one graduated at the 6th year.

**Transfer Students:** Fall 2007 and 2008 show higher numbers of incoming transfer students at nine and ten respectively. Three transfer students entered the program each Fall from 2009 to 2012. The number tripled to nine for Fall 2013. As stated above, not having the Spring transfer student information limits the ability to accurately gauge the number of new majors into our department. The conventional approach that looks at major at graduation shows that students also transfer into Geography from other majors. Of the nine students entering in Fall 2007, 55.6% graduated and 60% of the ten Fall 2008 cohort graduated. Of the URM transfer students, one entered Fall 2007 and graduated. Two entered in Fall 2008 and one graduated. The numbers slightly exceed university targets for total, URM, and non-URM populations.

**Graduate Program:** Except Fall 2009, the graduate program consistently admitted four to six students each Fall semester. Overall retention rate averages about 87%. Each year from 2006-2013, one of the incoming cohort was URM with 100% retention rate.

As of February 2015, the department has 30 majors with 82% attending full-time. We received nine new transfer students and two freshman admits for Fall 2014. Nearly 90% of our majors are male, consistent with the field of Geography, which remains male-dominated. This aspect of geography was reflected in the gender composition of the SJSU Geography department for nearly its entire history. The current chair, Dr. Kate Davis, was the first woman ever hired in a tenure-track position in this department (2005) even though Geography has been around at SJSU since the late 19th century. Currently, 2 of the 4 tenure/tenure track faculty are women, helping to diversify the department and, potentially, attract more women to the field.

**Attracting Minority Students:** We have a very good track record of attracting minority students to Geography. With the exception of 2006 and 2013 admits, the non-white student population in Geography exceeds 50% of our majors. In addition, as of Fall 2014, 14.3% of our majors are international students.

**Percentage of non-white students:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>64.3%</td>
</tr>
</tbody>
</table>

Geography - Program Planning Report Fall 2014
2011 65%
2012 57%
2013 44%
2014 47% (with 14.3% international students)

4b. Headcount in sections
Going back to academic year 2006-07, the average section size in Fall has remained consistent at 47 in lower division courses, which are all Core GE courses. Section size in upper division courses average 24 students. One of our UD courses is an Area V SJSU Studies course, which normally fills within 48 hours of registration opening. We have recently begun offering two sections of the course in order to help reduce bottleneck courses for the university. The size of our graduate sections is generally at the minimum number of 8, although at times it has been as high as 12. However, the number for graduate sections, which includes thesis and supervision units, skews the section size in for small departments making accurate analysis difficult. Spring numbers for all undergraduate courses are consistent with Fall except the normal small drop-off in numbers, which is common in GE courses. At 47, we exceed the College average headcount for lower division courses, which is 40.26. A headcount of 24 for our upper division courses is just below the College average of 25.82. We currently only have one SJSU Studies course in Geography, which negatively affects our comparison to College, as many departments have multiple SJSU Studies courses. We are planning to submit at least one course for approval as an Area S course and in the future hope to include an Area R course in our course listings.

Between 2006-2013, we averaged around 4.5 sections of LD courses and 11 UD courses. Each semester we normally offer 1-2 graduate courses. Over the next program planning cycle, we plan to significantly revise to our graduate program and anticipate consistently offering at least two graduate courses per semester.

4c. FTES, Induced Course Load Matrix
Program FTES increased steadily from Spring 2006 to Spring 2012. In Fall 2012, it jumped significantly to...? then settled back to approximately 125. There was another, less significant, increase in Fall 2013. Some of these spikes and dips can be attributed to ongoing system wide budget fluctuations. In Fall 2012 we put additional Core GE sections on the schedule to accommodate increasing demand with higher freshman admits in the University. Geography provides an important service to the University through our Core GE and Area V course offerings with students from every department on campus enrolled in our courses. We offer a certificate in GIS as well as a minor in Geography and a minor in GIS. As with most departments, it is difficult to track minors and we have not attempted this in the past. We are in process of reconfiguring the GIS Certificate and have had conversations with CIES regarding the possibility of a fully online professional certificate marketed to people working in the field and needing/wanting to improve and increase their skills in the area of GIS.

4d. FTEF, SFR, Percentage T/TT Faculty
FTES for major courses has remained relatively consistent although beginning Fall 2009 it dropped each year, reaching a low of 21.45 in Fall 2012. Since then it has begun to grow again reaching 28.92
in Fall 2013 and 30.68 in Fall 2014. The number of majors dropped in 2012-13, but has begun to climb again, reaching 30 majors which is historically consistent. The current chair, Kate Davis, has been at SJSU since Fall 2001 and for 10 years served as undergraduate advisor. During that time, the number of majors has consistently topped out at 30.

As stated previously, the Geography department provides important service to the university in Core GE course offerings in Areas B1, D1, and D2. Since 2009, the SFR in these courses averages about 50. This is a significant increase over the average from 2006-2008, which was 32.57. There was an increase to 61.8 in 2009 with the average since settling at around 50. This increase was due to increasing caps on all LD Core courses to accommodate more students.

From 2006 to 2008, our FTEF was consistent at 4.8, increasing in 2009 to 5.2, reaching a peak of 6.5 in Fall 2010. In the past three years it has averaged 5.33. We currently have 7 part-time instructors and four-tenured/tenure track faculty. After Spring 2015 our tenured/tenure track faculty will drop to 3 with the retirement of Richard Taketa.

5. PROGRAM RESOURCES

5a. Faculty

The list of current faculty include:

- **Kathryn Davis**, (Chair and Associate Professor), PhD (Geography), UC Berkeley, 2002. Interests: Environmental History; Historical Geography; History of Exploration; History of Science; Global Studies; Gender.
- **Gary Pereira**, (Assistant Professor & Graduate Advisor), PhD (Geography) University of Minnesota, 2002. Interests: Geocomputation, GIScience and Simulation, Remote Sensing, Physical Geography, Human-Environment Studies.
- **Kathrine Richardson**, (Assistant Professor & Undergraduate Advisor), PhD (Geography), University of British Columbia, 2006. Interests: Economic Geography; Urban Geography; Urban Design; Urban Ecology; Post-modern cities; Qualitative Research Methods.
- **Edward Collins**, (Lecturer) M.A. (Geography), New Mexico, 1992; ABD UCSB (Geography). Interests: Remote Sensing, Physical Geography.
- **Joseph Hasty**, (Lecturer) M.A. (Geography), San Jose State University. Interests: Human and Cultural Geography, Global Geography, Physical Geography.
- **Maureen Kelley**, (Lecturer) PhD (Geography), University of Oregon, 2013. Interests: Cognitive Mapping; GIS, Cartography; History of Cartography.
- **Eileen O’Halloran-Pena**, (Lecturer) M.A. (Geography), San Jose State University, 2003. Interests: Human and Cultural Geography; Latin America; Study Abroad; Travel Geography.
- **Thomas Orf**, (Lecturer) PhD (Education and Geography), University of Kentucky, 1999. Interests: Cultural Geography; Geography and Education; Quantitative Geography; South America.
- **Kerry Rohrmeier**, (Lecturer) PhD (Geography), University of Nevada, Reno 2013. Interests: Human and Cultural Geography; Cartography; GIS; Utopian Communities; Radical Geography.
• Tiffany Seeley, (Lecturer) M.A. (Geography) CSU Fullerton 2013. Interests: Physical Geography; Global Geography; Cultural and Human Geography; California Geography; GIS; Economic Geography; Persian Studies.

The faculty has not been sufficient to support instruction, service, and administrative commitments. We are too small to adequately perform many of the tasks required of departments such as staffing College committees, doing program reviews, and working with students on research projects. Since becoming Director of Global Studies in Summer 2012, Dr. Davis’s commitment to that program, and duties as department chair, have pulled her out of teaching geography courses. She now teaches almost exclusively in Global Studies except in winter and summer. With the retirement of Dr. Taketa this summer (2015) the department will effectively be left with only two permanent faculty members. The department is just too small to function effectively.

Dr. Taketa is our cartography and GIS expert and it will be important to replace him as soon as possible in order to maintain our ability to provide geography majors with the technical skills to help them be successful in their chosen careers. This is an important aspect of our major in terms of students being marketable at graduation and having the ability to pursue careers in the rapidly growing field of geospatial techniques and technologies.

5b. Support staff
The department has one half-time staff person, Jazmina Tamayo, an Admin Coordinator II. Jazmina supports all program operations including budget and scheduling with a great deal of efficiency and accuracy. Jazmina also serves as the sole support staff for Global Studies so the department has hired a work-study student, Kristin Putnam, to assist her in her duties. Kristin has become an asset to the department by allowing Jazmina to focus on the more complex tasks of budget, scheduling, etc. It will be important to continue employing a work-study student, because the work of supporting two programs is too much for one person.

5c. Facilities
The Geography department maintains a suite of 5 faculty offices, not including the Chair’s office, which is in a shared department office with Environmental Studies, a student workspace with 5 computers for student use, a seminar room, and a computer laboratory for GIS. One of the faculty office spaces is on loan to Environmental Studies, because they were overcrowded in their faculty offices. This leaves us 4 offices for our permanent and temporary faculty. Our one dedicated classroom is CL 224 and we use it for several of our classes. We use the seminar room for small seminar classes as well as graduate seminars. There are moveable tables and chairs with space for 20 students and an instructor. This is not a smart room and our projectors are old and need to be updated. This semester (Spring 2015) Environmental Studies is also using the seminar room for a class, and will be using it in fall for two classes. Our GIS lab was updated during summer 2014. The seminar room, faculty offices, and computer lab had not been painted in approximately 30 years. The linoleum was replaced in the seminar room and hallway. All except 3 of the rooms were painted. The seminar room and lab received new furniture and the lab received several new computers through the Refresh program. The computer lab has 15 stations and we teach our GIS courses there and our instructors use it for class projects. We have made offers to other
departments to reserve the lab for courses or special projects. The chair’s office hadn’t been painted or cleaned since the mid-1990s. (When we cleaned the piles of paperwork off the top of the old filing cabinets we found letters from 1995 at the bottom.) The office was painted and new furniture acquired.

6. OTHER STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND CHALLENGES

The greatest challenges we face as a department include a limited number of majors, decreasing numbers of full-time faculty, and a graduate program that needs an overhaul. As stated elsewhere in this report, two review cycles were skipped under the previous Chair and this has put us in a very difficult position. The advantage of conducting these reviews is that a department learns where it has been and where it can/should go in the future. We are now faced with significant challenges, many of which stem from stagnation in number of majors over the past decade while other closely allied programs such as Global Studies are growing.

Specifically, a major challenge that was highlighted as long ago as 2001, is that the number of geography majors is very small, at between 25-30 depending on the number graduating in a particular each year. Since the 2001 Program Plan, this situation has not substantially changed and was recognized as a problem in the 2001 self-study. As a result, the number of tenure/tenure track faculty has remained very small—no more than 4—and the chair has received only 0.2 administrative assigned time. Such a small faculty has resulted in excessive workloads. The department has not been able to meet many basic obligations of a freestanding department, such as providing representatives to major College and University committees, completing program reviews before this one, or responding to the myriad of administrative requests required of chairs. Without the prospect of immediate and rapid growth in majors, we need to consider options that will allow us to continue to offer geography degrees at SJSU while providing a more reasonable workload for faculty.

In considering options, we looked at the 2010 Association of American Geographers guide to geography programs in the U.S. While the information is not comprehensive, it is helpful in showing the state of such departments in California. Ten of the CSU geography departments were included in the data. Six of these have MA/MS degrees in addition to the BA/BS and one (San Diego State) offers a PhD. Department size, in terms of majors, ranged from 24 (Stanislaus) to 110 (CSU Northridge). The average size was 74 majors with an average graduate population of 46 although the range is from 12 to 84. Faculty size ranges from 3-12 with an average of 9. The department at SJSU is at the lower end of these scales, although not the smallest department.

There are 17 geography programs in the CSU system. Nine are stand-alone departments and eight are merged with other programs. Stanislaus is the only stand-alone department smaller than SJSU’s and Sonoma State’s is about the same size as our department. The other seven stand-alone departments have at least 70 majors and four have more than 100 majors. Of the merged programs, one is part of an Earth Sciences department, three are in departments with Environmental Studies, three are with Anthropology, and two are with Urban or City Planning programs.
The fact that many geography programs in the CSU are part of other departments shows how geography programs have evolved into more interdisciplinary programs and also how these programs have found a way to continue, even when the number of majors is small. As a faculty, we are considering collaboration or merger options. Please see our 5-year Plan for more details.

Another major challenge is that our graduate program has become stagnant and is in need of a significant overhaul in order to attract students and provide them with skills they need to advance in their current career or embark on a new career that requires an advanced degree. See our 5-year plan for more on our strategies to meet this challenge.

The curricular structure of our major was another challenge we faced, but this is one we dealt with last academic year. During 2013-14 we did a significant evaluation of our curriculum and redesigned the major folding the specializations into a general geography degree. This appears to be helping attract and keep majors at a better rate than in the past several years. The previous degree program included the requirement that majors select a specialization and with the low number of majors we were often unable to fill courses in each specialty area. This is a starting point for strengthening Geography as a major at SJSU. One of our strengths is our ability to problem-solve, expeditiously arrive at decisions, and enact changes that benefit our students.

We have been active in new course development since the last program review, building a stronger course portfolio to respond to changes in the field of geography and offer students courses that are appropriate for the time in which they live and work. Dr. Richardson has developed new courses in urban and economic geography: Geog 110 Urbanization of the Global South and Geog 117 Advanced Seminar in Economic Geography. Geog 110 is cross-listed by Urban Planning to bolster their offerings of upper division courses. Dr. Davis developed several courses over the past decade, including Geog 100W Writing Workshop; Geog 135 Qualitative Methods in Geographical Research; Geog 115 Geography of the Global Economy; Geog 125 Selected Topics in Human Geography; Geog 121 Population and Global Changes.

Another opportunity is to expand our offerings in all areas of Urban Geography. With increasing focus on creating livable, sustainable urban areas we can provide our students with skills and creative tools to move into careers in this field that is growing rapidly. See our 5-year plan for more on the ways we will incorporate this into the Geography major.

Some of our greatest opportunities and strengths lie in the STEM area of geospatial sciences and technologies. This is a diverse, competitive, and imaginative field of Geography, a field influenced, but not dominated by, commercial interests. It can be extremely useful to people who are proficient at using the technologies across a broad spectrum. This is an area in which we need to improve, reworking our geospatial courses so they integrate with our other courses and incorporate student research. In the past a specific vendor, ESRI, has dominated the courses. Introducing students to open-source products as well as products like Intergraph, ENVI, and Imagine, will provide a foundation of skills that will allow our graduates to compete for high level positions. One of our immediate needs is to change the credit structure of our lab courses. Currently, students do not receive credit for the additional hours required in lab courses and we will work on changing our lab
Another strength of the Geography program is its two endowments, the Mary Joe Endowment and the Maria Henley Endowment. Dr. Richard Taketa created the Mary Joe Endowment in honor of his wife, Mary Joe. The purpose of the endowment is to support and advance geography at SJSU. Sharon Metzler, a former graduate student in Geography, set up the Maria Henley Endowment in honor of her mother-in-law, Maria Henley. Both endowments are growing and the Mary Joe Endowment, this semester (spring 2015), provided a course release for Dr. Richardson to work on marketing the program and networking with companies in Silicon Valley that might be good sources for internships and jobs for our students and graduates.

Even though we face several challenges over the next planning cycle, we are working on innovative and carefully crafted solutions to these challenges and anticipate a positive report in five years.

7. DEPARTMENT ACTION PLAN

1. Develop a realistic plan – most likely a plan for joining with a strong and supportive institutional unit at SJSU – in order to grow majors, reduce the administrative workload on faculty, and continue to offer geography and global studies programs to SJSU students.

2. Hire one new permanent faculty member with expertise in both geospatial and human geography to lead the GIS program and continue to advance geospatial technology courses to keep pace with current technologies.

3. Outreach to companies, organizations, and public agencies in the Bay Area to develop networks, internship opportunities, employment, and funding for student research.

4. Restructure the graduate program, revise existing courses, and develop new courses to bring it up to date and ensure the curriculum and training meet the needs of companies, organizations, and public agencies that will employ our MA graduates.

5. Develop and carry out a plan to recruit students interested in working in geospatial technology, an important and growing STEM field.

6. Continue development of the Urban Worlds theme and cross-list courses with Urban Planning, Sociology, and Environmental Studies, as appropriate.

7. Continue curriculum development to provide more depth and breadth to enhance student experience and skills such as critical thinking and the ways in which human geography and technology merge in synergistic ways.

8. Work with the University to ensure Geography programs receive the technology and other resources needed to provide strong STEM and GIS curriculum to students.

9. Restructure major requirements as needed.

Please see the attached 5-year plan for a detailed narrative on our proposed actions over the next review cycle. There is a great deal of work to be done, but the faculty, both permanent and temporary, are working together to make the changes we need to grow and provide students with
the knowledge, skills, and tools to have the careers they are interested in pursuing and to graduate students who will contribute to the betterment of their community and region.

8. APPENDICES

A. Required Data Elements

<Please copy the following data from the IEA website:

From www.iea.sjsu.edu/Courses/default.cfm#Prefix, select your program
   Exhibit 1 Number of Course Sections
   Exhibit 2 Average Headcount per Section
   Exhibit 3 Student to Faculty Ratio
   Exhibit 4 Induced Course Load Matirx

From www.iea.sjsu.edu/Assessment/ProgRev/default.cfm, select your program
   Exhibit 5 Applied, Admitted, Enrolled
   Exhibit 6 Enrollment by Class Level with FTES
   Exhibit 7 Enrollment by Major and Concentration
   Exhibit 8 Degrees Awarded

From www.iea.sjsu.edu/RetnGrad/default.cfm#Prefix, select your program
   Exhibit 9 First Year Retention Rates
   Exhibit 10 Graduation Rates

Also calculate T/TT instructional faculty percentage. From
www.iea.sjsu.edu/Faculty/default.cfm#Dept, select your department. Under “Instructional Faculty – FTEF”, select “by Tenure Status”. Add together “Tenured” and “Probationary” numbers, and divide sum by “Total”. >

B. Accreditation Report (if applicable)

C. (Example) List of PLOs for each program

D. (Example) Data

E. (Example) Curriculum flow charts, and mappings

F. (Example) Assessment rubrics

G. (Example) Student success data summary