# Doctoral Program Assessment Project 

## Self-Study Report Template

## ForAugust2003throughAugust2007

## Due:

## PhD in Political Science

## Basic Information

1. Type of program: Select all that apply.


Professional
X $\square$
ResearchInterdisciplinaryApplied
2. Date program founded or began.

Approved by Texas Higher Education Coordinating Board, April 24, 2003; Students first enrolled Fall, 2003.
3. Describe the founding and development of any related centers.

The Center for the Study of Texas Politics was created in the 2002-03 AY to develop opportunities for interaction with Texas' leading policy makers and to enhance the quality of instruction, research, and service. The Center sponsors programs that bring state leaders to campus to discuss topics of policy interest and it advances the study of Texas politics through graduate fellowships and through mentoring programs for undergraduate scholars.

The Center for Election Law and Redistricting (newly founded).
4. Attach department charter and bylaws.

See Appendix A: Political Science Management Plan, 2003
5. Describe resources supporting the program such as libraries, laboratories, etc.

Students have access to the computing facilities in the School of Economic, Political and Policy Sciences and the University's Computing Center. These include two computing laboratories EPPS Statistics Teaching Lab and GIS Teaching Lab - that house over 50 computers that are network linked and equipped with major social Science software, including e-Views, R, RATS, SPSS, and STATA. A computerized geographic information system, the Lexis Nexis Database, and WestLaw are also available for student use. And, student teaching assistants are equipped with their own desktop computers and shared printers. The University's Computing Center provides personal computers and UNIX workstations.

Many important data and reference materials are available online from professional associations or at UTD via the Library's and School's memberships in the American Political Science Association, the European Consortium for Political Research (ECPR), the Inter-University Consortium for Political and Social Research (ICPSR), the Roper Center, the University Consortium for Geographic Information Science (UCGIS), and other organizations. The Library has a substantial number of Political Science journals.

Students have opportunities to participate in research programs directed by members of the faculty. As appropriate, some students may have access to methodological development activities offered by the School's membership in the SCPR, ICPSR, and UCGIS. In addition, students are eligible to participate in the professional development activities provided by the American Journal of Political Science, Electoral Studies, and Political Research Quarterly.

To attract the best students, editorial, research and teaching assistantships are available. Editorial assistantships are available through the journals listed above and supported by the University. Other assistantships are provided to work with faculty at the Texas Politics Center or on instructional activities.
6. Other information the department would like to provide.

Not applicable.

## Program Philosophy and Mission

1. What is the mission of the doctoral program?

The mission of the Ph.D. in Political Science is to provide a rigorous, sharply focused disciplinary program with strong multidisciplinary links. This program consists of innovative, state-of-the-science graduate education in political methodology and in the fields of democratization, globalization and international relations, political and government institutions and processes, and decision making and public management. Students acquire basic research skills and tools and work on research projects, they further develop instructional and presentation skills, and they interact with highly regarded scholars and practitioners in their fields of study. Students are prepared for analytical and administrative positions and responsibilities in academe, firms, government, and other organizations
2. Is this a published official mission statement? $X \square$ YesNo
3. How is the program mission related to other key UTD statements, such as:
a)The University's Strategic Plan -

II-1. The Education of Leaders
II-3. Investment in People
III-1. Dynamic Change Management
IV-1. National and Global Security
V-2. Enhanced Quality of Life
b) Related Institutional Priorities -

COM-3. Sustain progress towards Tier One status in terms of program, research and faculty quality.
CPT-3. Significantly improve quality of UTD's graduate students.
CPT-5. Increase retention and graduation rates.
SP-6. Increase number of PhDs granted.
SP-7. Enhance graduation rates.
4. Please attach or submit your college or unit academic plan and/or strategic plan when available.

See Appendix B: Political Science Strategic Plan, 2005
5. Is this program regionally or nationally ranked? If so, how and by whom?

Currently unranked due to relative newness of the Program.
6. Other information the department would like to provide.

Not applicable.

## Benchmarking

1. Identify three peer programs: University of California-Davis, University of California-Irvine, Rice University
2. Identify three aspirational peer programs: California Institute of Technology, New York University.
3. Identify any other source from which benchmark or ranking data may be obtained. Please attach this data or provide the website where this information can be accessed.

Benchmark or ranking data may be obtained from the American Political Science Association's PS: Politics;, the National Research Council Report, or U.S. News and World Report. The relative newness of the Political Science PhD Program means that it does not yet appear in most of these reports.

## Program Design

1. What employment opportunities are students in the program being prepared for?

The Program is intended to educate highly qualified students for fulfilling careers in academe, government, industry, and non-profit organizations in the Dallas-Fort Worth, state, national, and other arenas. This means:

- Knowledge generation and instruction associated with the emerging fields of Democratization, Globalization and International Relations, Political and Governmental Institutions and Processes, and Public Management and Decision Making, as well as established areas of American, comparative, and international government and politics at liberal arts colleges and major research institutions.
- Decision making and public management with a variety of local, state, and national administrative agencies, including budget, emergency-management, and domestic and international security agencies and offices.
- Legislative staffing at the local, especially state, and national levels with direct ties to the Center for The Study of Texas Politics.
- Survey research methodology and public opinion polling for legislative offices and offices of legislative and public affairs with state and national agencies and in the private sectors.
- Research infrastructure and support, including those associated with data laboratories, data libraries, social science data consortia, and software management.
- Advisory and consultancy positions regarding electoral redistricting, legislative seat allocations, judicial selection processes, and modeling and forecasting of conflict resolution, electoral decisionmaking, public policy, and risk assessment.

2. What are the requirements of the program?
a) Fill in : hours in major field; hours in minor or cognate field; statistics or research design; etc.)

90-credit hour degree program: 21 core course hours (including 6 research design/theory and 6 research methodology/statistics hours), 12 major field course hours, 9 minor field course hours, 18 elective course hours, 30 dissertation hours.
b) How many credits must be taken at UTD?

The Examinations are based on the core and field courses and, accordingly, these courses must be taken at UTD. Transfer credit can be given for elective courses.
c) If there are consortium arrangements with other universities, how is this requirement achieved?

Not applicable.
3. How are the requirements of the program designed to ensure fulfillment of the mission?

1. Students will exercise skills necessary to meet administrative, educational and research needs, including critical and constructive thinking, effective communication, rigorous research, and competent managerial skills.
2. Students will learn to describe, to classify, and to analyze the causes and consequences of the unprecedented unfolding of democracy on a global scale, its successes and failures, and its opportunities and problems during an era of globalization and of ongoing subnational, national, and transnational conflicts and negotiations.
3. Students will learn to describe, to classify, and to analyze the major theories, methods, and findings that are used to explain the participation of individuals in a variety of institutional settings, how institutions can be designed to promote both collective goods and individual gains, and how changes in institutions have consequences for individuals.
4. Students will be able to describe and explain the theories, models and practices of group activity, human decision making, management science, organizational design,
1.1 Students will complete the core courses in empirical theory and research design (PSCI 5350, PSCI 5 5360, PSCI 5362) and basic knowledge in political science (PSCI 5301, 5303, 5305).
1.2 Students will demonstrate understanding in response to relevant and progressively rigorous essay que 5303, 5305)
1.3 Students will demonstrate their research construction and analysis skills in response to take-home res 5362)
1.4 Students will develop communication and presentation skills through individual and group class prese topics in core courses.
1.5 Students will complete course evaluations that will help to determine whether the stated learning objec met.
2.1 Students will complete the core course (PSCI 5301) and the major/minor field courses (PSCI 6309, 63 democratization, globalization and international relations.
2.2 Students will construct essays, case studies, research literature reviews, and research projects in core
2.3 Students will participate in class discussions and presentations of research papers on theories, explan democratization, globalization and international relations in core and field courses.
2.4 Students will complete course evaluations that will help to determine whether the stated learning objec are being met.
3.1 Students will complete the core course (PSCI 5303) and the major/minor field courses (PSCI 5302, 53 7344,7350 ) in government and political institutions and processes.
3.2 Students will devise and develop essays, research literature reviews, and research projects that hypoth
3.3 Students will participate in class discussions and presentations of research papers on theories and exp democratization and globalization
3.4 Students will complete course evaluations that will help to determine whether the stated learning objec are being met.
4.1 Students will complete the core course (PSCI 5305) and the major/minor field courses (PSCI 5302, 53 $6328,7352,7370,7375$ ) in decisionmaking and public management..
4.2 Students will demonstrate their skills on research papers that require them to identify important ways o political, or policy problems and solutions.
policy making, and risk assessment involving knowledge producers, private firms, and government agencies and departments.

Other Outcomes: Students will be prepared to teach and to conduct research in American, comparative, or international government and politics; democratization, globalization and international relations; governmental and political institutions and processes; and public administration, decision making, and risk management.
4.3 Students will participate in class discussions and presentations of research papers or reports.
4.4 Students will complete course evaluations that will help to determine whether the stated learning objec are being met.

Academic planning and definition of five-year recruitment, retention, funding and graduation goals.
Student placement on research grants and contracts and on programs of professional meetings.
Students will be assigned, at the end of their first year, a Three-Person Advising Committee consisting of a professor, and a graduate advisor for research development, teaching skills development, and career of dissertation committee.

Exit interviews in final semester that serve as benchmarks for follow-up surveys of alumni

Follow-up surveys of alumni
4. Are key elements of the curriculum made available on a schedule that facilitates timely completion of the program by students? Attach course rotation schedules for the previous three years.

The Political Science Ph.D. Program has a cohort design that permits scheduling in a way that enables full-time students to complete the core coursework in the first year, the field coursework and electives in the second and third years, and the dissertation in the late third or the fourth year.

|  | $2003-04$ | $2004-05$ | $2005-06$ | $2006-07$ |
| :--- | :---: | :---: | :---: | :---: |
| Core |  |  |  |  |
| 5301 Proseminar in Democratization, Globalization and <br> International Relations | S | S | S | S |
| 5303 Proseminar in Institutions and Processes | F | F | F | F |
| 5305 Proseminar in Decision Making and Public <br> Management | S | S | S | S |
| 5350 Logic, Methodology and Scope of Political Science | F | F | F | F |
| 5352 Empirical Democratic Theory | S | S | S | S |
| 5360 Data Collection and Analysis | F | F | F | F |
| 5362 Multivariate Models | S | S | S | S |


| Democratization, Globalization and International Relations Field |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 6308 International Political Economy and Organizations |  | F |  | F |
| 6335 Institutions and Development |  | S |  | F |
| 6337 Comparative Institutions |  | S | F | S |
| 6362 Political Development | F |  | S |  |
| 7320 International Negotiations |  | S |  | S |
| Political and Government Institutions and Processes Field |  |  |  |  |
| 5302 Law and The Policy process |  | S |  | S |
| 5304 Policy Processes, Implementation and Evaluation | S | S |  | S |
| 6324 Local and State Government and Politics |  |  |  | S |
| 6331 Executives, Legislatures and Public Policy |  | F |  | F |
| 6333 Political and Civic Organizations |  |  |  | F |
| 6336 Bureaucracy and Public Policy |  |  | F |  |
| 6337 Comparative Institutions |  | S | F | S |
| 7344 Gender and Public Policy |  |  | F |  |
| 7350 Institutions and Citizen Behavior |  |  | F |  |
| 7352 Theories of Choice and Decision Making |  |  |  |  |
| Decision Making and Public Management Field |  |  |  |  |
| 5302 Law and The Policy Process |  | S |  | S |
| 5315 Public Management | F | F | F | F |
| 5364 Mathematical Models in Political and Social Science |  |  |  |  |
| 6320 Organizational Theory | F | F | F | F |
| 6324 Public Choice |  |  |  |  |
| 6325 Decision Theory |  |  |  | F |
| 6326 Decision Tools for Managers | F | F | F | F |


| 6328 Management Process and Analysis | S | S | S | S |
| :--- | :---: | :---: | :---: | :---: |
| 7352 Theories of Choice and Decision Making |  |  |  |  |
| 7370 Decision Making, Complexity and Risk |  |  |  |  |
| 7375 Applied Studies in Human Decision Making |  |  |  |  |
| POEC 5305 Microeconomics (recommended) |  |  |  |  |
| POEC 7340 Domestic Social Policy (recommended) |  |  |  |  |
| ACN 6330 Cognitive Science (recommended) |  | S |  | F+S |
| 7V81 Special Topics | SM | SM | SM | SM |
| 8381 Research Seminar in Political Science | S | S | S | S |
| 8V99 Dissertation or Practicum |  |  |  |  |

5. If UTD offers a similar program at the undergraduate level, how is the post- baccalaureate program progressively more advanced in content?

Not applicable.
ii)If there are courses of similar name or similar substantive content, how are the graduate courses progressively more advanced than those offered at the undergraduate level?

Not applicable.
iii) Are there any situations in which undergraduates and graduate students are co-enrolled in their respective courses at the same time with the same instructor?

In the fast-tracking program, qualified undergraduate students can enroll in graduate-level courses and are expected to perform at the graduate level in these courses.
6. Describe how the program and curriculum are reviewed and updated to maintain currency in the field.

Ongoing research and editorial activities of the faculty ensure the introduction of innovative and new materials to the curriculum. Periodic review occurs by the Political Science Program Head, the Political Science Program Committee, and the Program faculty and during biennial catalog revisions, annual examination cycles, and semester-specific course scheduling.
7. Do program requirements include courses in which students gain knowledge of literature of the discipline? If so, which courses?

Political Science doctoral programs are reading, research, and writing intensive. This Program is typical in these regards - students receive extensive exposure to the theoretical, methodological and substantive materials of the research literature in all courses, including, but not limited to, the theory
and proseminar courses, the field courses, and the research seminars. Most of these courses require literature reviews as part of course papers.
8. Does the program require students to be engaged in research, professional practicums, or similar training experiences? If so, what are they and how is this requirement structured?

Political Science courses require term papers, most of which involve literature reviews and empirical analytics, as well as in-class research presentations.
9.Other information department would like to provide.

## Program Faculty

1. List all faculty who are providing instruction for the program by name, rank, tenure or tenure-track status, gender, years at UTD, year doctoral program was completed, institution granting the degree. Provide an updated CV for each person.

| Name | Rank | Tenure/Tenure Track | Years at UTD | Years Doctoral | Institution Granting the Degree | Gender |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Brandt, Patrick | ASSIST | Tenure Track |  |  |  | Male |
| Brandwein, Pamela | ASOC | Tenured |  |  |  | Female |
| Brunell, Thomas | ASOC | Tenured |  |  |  | Male |
| Champagne, Anthony | PROF | Tenured |  |  |  | Male |
| Chevrier, Marie | ASOC | Tenured |  |  |  | Female |
| Clarke, Harold | PROF | Tenured |  |  |  | Male |
| Elliott, Euel | PROF | Tenured |  |  |  | Male |
| Harpham, Edward | PROF | Tenured |  |  |  | Male |
| Holmes, Jennifer | ASSIST | Tenure Track |  |  |  | Female |
| Keith, Linda | ASSIST | Tenure Track |  |  |  | Female |
| Kiel, Douglas | PROF | Tenured |  |  |  | Male |
| King, Chad | ASSIST | Tenure Track |  |  |  | Male |
| Lowry, Robert | PROF | Tenured |  |  |  | Male |
| Peinhardt, Clint | ASSIST | Tenure Track |  |  |  | Male |
| Robinson, Scott | ASSIST | Tenure Track |  |  |  | Male |
| Stewart, Marianne | PROF | Tenured |  |  |  | Female |
| Thielemann, Gregory | ASOC | Tenured |  |  |  | Male |
| Wilson, Carole | ASSIST | Tenure Track |  |  |  | Female |

2. Provide the following data regarding the instructional activities of core faculty:
a. Number of dissertations (Doctoral) chaired: 8
b. Number of Thesis (Master's) chaired: Not applicable.
c. Number of dissertation committee memberships: 32
d. Number of organized classes taught
e . Expected average number of organized classes taught by core faculty per academic year:
f. Other courses (internship supervision, clinical supervision, studio, research, dissertation, Thesis, etc.)
3. Provide the following data comparing your program's faculty to three of the program's benchmark institutions and three of the aspirational peer groups:

Number of core (i.e. full time masters, tenured and tenure-track faculty) by rank, ethnicity, and gender in the doctoral program

Number of publications (i.e. peer-reviewed publications in excellent or highly respected journals and publishing houses) per full-time faculty equivalent (FTFE) of core doctoral faculty per year.

Total dollar amount of research expenditures and dollar amount of research expenditures per FTFE of core doctoral faculty.

Average number of organized classes (both Graduate and Undergraduate) taught by core faculty for academic years 02-03, 03-04, and 04-05.
4. List special honors that have been received by the program faculty during the last 3 years.
5. Other information the department would like to provide.

## Students

1. From which universities do the new admits come?
2. Describe the admission standards and the process of selecting applicants for admission to the program used during the previous three years. Programs with approved holistic processes should also include this current selection procedure.
3. Provide data for the last 3 years on:
i. The number of applicants to the program for each year.
ii. The number and percentage admitted to the program each year compared with the number of applicants.
iii. The number and percentage of new admits who enrolled compared with the number who were admitted.
iv.The number of students who completed the degree program each year .

| Year* | $\begin{aligned} & \text { New } \\ & \text { FT } \\ & \text { PT } \end{aligned}$ | $\begin{aligned} & \hline \text { Total } \\ & \text { FT } \\ & \text { PT } \end{aligned}$ | Persistence Percent (Students continuing in program) FT PT |
| :---: | :---: | :---: | :---: |
| 2003-04 | 13 | 13 | 100\% |
| Cohort 1 | 1 | 1 | 100\% |


| $2004-05$ <br> Cohort 2 | 12 <br> 4 | 17 <br> 5 | $68 \%$ <br> $75 \%$ |
| :---: | :---: | :---: | :---: |
| $2005-06$ | 16 | 30 | $91 \%$ |
| Cohort 3 | 5 | 9 | $90 \%$ |
| 2006-07 | 10 | 37 | $93 \%$ |
| Cohort 4 | 3 | 11 | $92 \%$ |

*Start with $1^{\text {st }}$ program year $\mathrm{FT}=$ full-time $\mathrm{PT}=$ part-time
3. Provide the number and percent of full-time and part-time doctoral students by gender and ethnicity (cross-tabs) for the last three years.

Fall, 2006:
Female = 31\%

Asian = 6\%
Black = 13\%
Caucasian $=54 \%$
Hispanic = 9\%
Native-American $=2 \%$
Non-Resident $=17 \%$
5. Provide the number and percent of full-time and part-time doctoral students with fellowships, scholarships, research assistantships, or teaching assistantships /teaching fellowships.

Fall, 2006: \% financially supported $=69 \%$ (4 editorial assistants, 1 research assistant, 21.5 teaching assistants)
6. Describe the types of financial support and dollar amounts provided to doctoral students in the program.

Average annual support $=\$ 14,400$ 12-month stipend $+\sim \$ 8,000$ tuition/fees
7. How many students receive tuition support? Where does this support come from?
24.5 receive tuition support from state sources.
8. Provide the number of doctoral student scholarly activities (peer-reviewed publications; presentations, exhibitions, or performances at national or international platforms or highly recognized state or regional venues).
9. Describe major accomplishments, honors, etc. among the program's doctoral graduates.

The Program just produced its first graduate in Spring, 2007.
10. Provide the following data comparing your program's doctoral students to three of the program's benchmark institutions and three of the program's aspirational peers.
i. Average dollar amount of financial support (fellowships, TA's and RA 's) for doctoral students.
ii. Percentage of doctoral students receiving tuition waivers or tuition scholarships.
iii. Graduation/attrition rates
iv. Number of doctoral degrees conferred
11. Other information or data that the department would like to provide.

## Outc omes

1. What are the key learning outcomes that have been identified for the program?

Students will exercise skills necessary to meet administrative, educational and research needs, including critical and constructive thinking, effective communication, rigorous research, and competent managerial skills.

Students will learn to describe, to classify, and to analyze the causes and consequences of the unprecedented unfolding of democracy on a global scale, its successes and failures, and its opportunities and problems during an era of globalization and of ongoing subnational, national, and transnational conflicts and negotiations

Students will learn to describe, to classify, and to analyze the major theories, methods, and findings that are used to explain the participation of individuals in a variety of institutional settings, how institutions can be designed to promote both collective goods and individual gains, and how changes in institutions have consequences for individuals.

Students will be able to describe and explain the theories, models and practices of group activity, human decision making, management science, organizational design, policy making, and risk assessment involving knowledge producers, private firms, and government agencies and departments

Students will be prepared to teach and to conduct research in American, comparative, or international government and politics; democratization, globalization and international relations; governmental and political institutions and processes; and public administration, decision making, and risk management
2. What methods are used to determine whether students have achieved the key learning outcomes of the program?

Students will demonstrate understanding in response to relevant and progressively rigorous essay questions in core courses (5350, 5352, 5301, 5303, 5305).

Students will demonstrate research construction and analysis skills in response to take-home research assignments $(5360,5362)$.

Students will develop communication and presentation skills through individual and group class presentations and discussions on relevant topics in core and field courses.

Students will construct essays, case studies, research literature reviews, and research projects in core and field courses.

Students will participate in class discussions and presentations of research papers on theories, explanations and findings involving democratization, globalization, and international relations in core and field courses.

Students will design and develop essays, research literature reviews, and research projects that hypothesize and test models and data on institutions and processes.

Students will demonstrate skills on research papers that require them to identify important ways of evaluating and solving legal, political, or policy problems and solutions in decision making and public management.

Students will complete course evaluations that help to determine whether the stated learning objectives for the course are being met.

Students will be assigned, at the end of their first year, a Three-Person Advising Committee that consists of a major field professor, a minor field professor, and a graduate advisor for research development, teaching skills development, and career planning - 3-PAC become nucleus of dissertation committee.

Students will be placed, as appropriate, on research contracts and grants and on programs of professional meetings.

Students will receive exit interviews in final semester that serve as benchmarks for followup surveys of alumni and, in part, of program progress.
3. How many graduates are employed in a position in their field (including post-doctoral positions) within one year of completing their doctoral degree programs? Where have the graduates been employed?

The Program just produced its first graduate in Spring, 2007.
4. Summarize improvements to the program that were based on assessment results for the 3 years.

Show students how to improve reading and presentation skills by targeting overall and specific key points, thereby enabling them to trace the logic and to assess the credibility of arguments and findings in a straightforward and efficient way.

More effort to implicate all students in research projects, whether externally funded or not, being made. Faculty are, and will continue to be, centrally involved in helping students to locate post-graduate employment by bringing opportunities to student attention, devising strategies for job seeking, writing recommendations, tutoring on interviews, and related.

Use cohort design of Program to greater advantage to form 3-PACs and to schedule meetings with students to ensure that they receive best possible research and career advice and make timely progress towards degree completion.

Administer exit interviews to first and successive cohorts of graduates at times of graduation. Interviews designed to assess specific areas of affect, evaluation, and cognition of the Program and overall level of satisfaction with it.

Do alumni outreach to track students' (re)assessment of program contributions to career changes and to attract their subsequent contributions to program development and student support.
5. What is the placement record for students who have graduated in the last three years?

The Program just produced its first graduate in Spring, 2007.
6. In what ways is this program distinctive from similar programs at other universities in Texas, and elsewhere?

The Program is distinctive in at least three ways - first, it has a cohort design that facilitates course scheduling, 3-PAC formation, and faculty-student professional interactions. Second, it has 3 fields that crossover traditional field definitions in Political Science (American, comparative, international relations, methodology, and theory) and that bridge to other disciplines in social and other sciences. Third, it enables students to further develop their methodological skills by taking courses being taught by nationally and internationally recognized faculty in Political Science and other disciplines in the School as well as by those affiliated with the Essex Summer School in Social Science Data Collection and Analysis.
7. Other outcome information the department would like to provide.

## Budget

1. What is the approximate proportion of the total departmental budget that is dedicated to doctoral program support? Describe the areas of support.
2. Describe budgetary challenges that the department has dealt with to support the doctoral program.

## Departmental Conclusions and Recommendations

1. Describe the area(s) of the doctoral program that you (the department) consider excellent.
2. Describe the area(s) of the doctoral program that you (the department) consider areas of limitation or challenge.
3. If you (the department) were provided with additional funding each year for doctoral education that consisted of an amount equal to 5\% of your total departmental budget, what would your (i.e. the department's) priorities be for spending the increase?
4. List and explain the department's recommendations for improvement of its doctoral program.
5. Other conclusions and/or recommendations that the department would like to provide.

Greatest Opportunities:
To effect a hands-on instructional and research program with increasing capacity to attract talented students and faculty having disciplinary strength and multi-disciplinary interests and expertise, thereby taking advantage of the visibility-boosting power of the American Journal of Political Science.

To become the first-ranked Political Science department in Texas and among the nationally top-ranked departments with FTE faculty <25 within he next 5 years in terms of research productivity and reputation for quality graduate education.

## Possible Challenges:

To hire experienced faculty needed to provide program leadership and professional mentoring of junior faculty, as well as educational and research support to talented graduate and undergraduate students estimated net gain faculty needed within 1-2 years: 4 - estimated net gain student assistantships needed within 1-2 years: 8 - estimated net gain maintenance and operation and travel needed within 1-2 years (to support computing needs, conference activity, and pilot projects): \$50,000

To stabilize a sometimes rapidly changing decisionmaking and program-planning environment with budget and personnel needed to nurture program to full capacity.

