CHECKLIST FOR RETURN OF 2006 FIVE-YEAR REPORT MATERIALS TO ACS COMMITTEE ON PROFESSIONAL TRAINING

- A. <u>ONE ORIGINAL AND TWO COPIES</u> of the five-year report form. Please ensure all pages of the form are completed. Provide information only on your curriculum that leads to an ACS-certified degree. Refer to the enclosed guidelines booklet for the requirements for an ACS-approved program.
- B. For the curriculum summary (Tables I-III) and teaching load (Table IV) sections of the form, please report information from the <u>2005-2006</u> academic year. Please use all available space in Table IV report several faculty members on each page.
- C. <u>Item 5a, page 2:</u> Ensure that you have recorded a "0" in the total/all faculty cell for each category in which you have no faculty.
- D. <u>TWO</u> copies of your current school catalog. If your institution does not produce printed catalogs, please print out and submit **TWO** copies of the degree requirements and course listings for both the chemistry and the physics programs.
- E. Please place the school name, course name, course number, and year taught in the **TOP RIGHT HAND CORNER** of all syllabi and tests/examinations submitted.
- F. <u>TWO</u> copies of the most recent syllabi and all tests/examinations for any upper level and advanced courses in your program that do not have physical chemistry as a prerequisite (see page 8 of the enclosed report form). If a course does not have examinations, please provide other supporting documentation that illustrates the level at which the course is taught. <u>NOTE:</u> If you have used ACS standard exams in the last two years, please provide profiles of your students' rankings on each examination.
- G. <u>TWO</u> copies of the most recent syllabi and all tests/examinations for the courses that you are using to satisfy the new biochemistry requirement. If you are using an integrated approach, please clearly identify the courses that are being used for this purpose.
- H. If you use an integrated approach to cover core topics (*e.g.*, descriptive inorganic chemistry in the general chemistry course), please send **TWO** copies of the syllabus and all tests/examinations from the most recent offering of each relevant course(s) (see page 6 of the report form).
- I. If you do not list a textbook for a course, please provide <u>TWO</u> copies of the syllabus and all tests/examinations, including a <u>list of experiments</u> in the case of laboratory courses. It is not necessary to submit lab manuals or extensive detail on lab courses unless specifically requested after CPT has reviewed your report.
- J. If you use a laboratory research course as one of your advanced course options, please provide a sampling of research reports (<u>THREE to FIVE</u>) that have been prepared by your students, representative by discipline and faculty, with the grade the student received indicated on each. Do not send co-authored publications. These reports will be returned if you so indicate in item 11 of the five-year report form.
- K. If your department does not have a full listing of faculty in the ACS Directory of Graduate Research, please complete Faculty Personal History Record forms for any new (starting the fall 2001 term) faculty who are still in your department.

 DO NOT include faculty hired before the fall of 2001. Please photocopy the enclosed form if you need to report more than one new faculty member.

The electronic version of the five-year report (as a locked Word file) can be found at:

URL: http://center.acs.org/cpt/

Username: **hydrogen** Password: **bonding**

2006 FIVE-YEAR REPORT TO THE ACS COMMITTEE ON PROFESSIONAL TRAINING

Please remember that the information contained in this report should pertain only to your undergraduate program. The Committee reviews a large number of reports each time it meets and reports not completed on this form significantly increase the time required for review. *Therefore, responses must be given on this report form unless the reproduction is identical in format and pagination to this form.*

College or University	The University of	Texas	at Dallas				_
City, State, and Zip Code	Richardson, Texa	s 7508	83				
	and Title) Dr. Joh ail address ferrari ne Number 972-883	s@utda]		rofessor	& Head,	Chemistry	_ _ _
Date Report Submitted	3/30/2007						_
Chemistry Department/Prog	gram Chair or Head	Name Title	Dr. John Drofessor			ry	<u> </u>
President or Principal Admi Institution	inistrator of	Name Title	Dr. David President	E. Dani	el		<u> </u>
Note: Two significant figure parentheses. Please consulttp://chemistry.org/educati	ult the enclosed guideli						
Degrees Offered in Che (check those offered)	mistry			chelor ster .D.			
2. Number of Calendar We	eeks (Not Counting Fin	al Exams	•		15		
3. Number of Students in (most recently complete Sum o		emistry (Chemist	re Campus try Seniors Fall Term	114	:	
4. Number of Chemistry G	raduates (<u>Five-year tot</u>	<u>:al</u>)		Nan Cant	uiti a al	المالية	
Went to:	Chemistry Grad Medical School Other Profession Industry Teaching Other/Unknown	l onal Scho		8 6 5 2 13	ea	Certified 13 1 6 0 2 10 32	_ _ _ _ _

Requested 1 Granted 1

6.	Contact Hours	(classroom and	d laboratory):

 a. Contact hours/we 	ek:
---	-----

5. Faculty:

With Ph.D.

With Ph.D.

Tenured

Adjunct

Temporary

Tenured

6 to 12 ; Range from Average

b. Are maximum and minimum teaching loads established as an institutional policy? Yes 🖂 If so, explain briefly:

Tenure track teaching loads are comprised of classroom teaching (and labs) and research direction. Senior lecturer teaching loads are satisfied by classroom teaching alone.

c. Do contact hours include time spent supervising undergraduate research? Yes

	College or University
7.	Chemistry Expenditures (rough estimates - 2 significant figures): If your expenditures are over \$60,000 per year, excluding internal and external grants, salaries, and library budget, please check here ⊠ and go to item 8
	Current Five-Year Annual Average
	a. Operating Expenditures Exclusive of Salaries b. Instrument Maintenance and Repair c. Grants
8.	Support Staff: Number Secretarial Number Stockroom Number Instrumental Technicians Number Other
9.	Library and Literature Access
	a. Number of Chemistry Journal Subscriptions in Your Campus Library(s):
	*Fewer than 20 ☐ *20-30 ☐ 31-50 ☐ Over 50 ⊠
	*Complete Appendix A, if fewer than 31.
	b. Chemical Abstracts: Hard copy Online through SciFinder Online through STN Other Access Please Specify:
	i. Report the number of Chemical Abstract searches per year or the expenditure for searches per year. Chemical Abstract searches are done as descibed below but are not monitored.
	 ii. Describe briefly how undergraduate students and faculty access titles and abstracts on a regular basis (offices, library, other). SciFinder and Electronic journal access is free to students and faculty from offices, library and computer facilities. All ACS, Elsevier, AIP, Wiley, etc. journals are available.
	c. Literature Access: How do students learn to use the chemical literature, print and electronic? (Check appropriate items)
	Dedicated course in chemical literature In research and/or independent study Integrated in other chemistry courses
10	. Biochemistry Requirement:
	 a. Please submit syllabi and all exams for all courses used to meet the biochemistry requirement. b. Please describe how the biochemistry requirement is met in your curriculum. Include course name(s) and number(s). a. See syllabi CHEM/BIOL 3361 & 3362 b. The biochemistry requirement is met by formal courses (CHEM/BIOL 3361 (required) and CHEM/BIOL 3362(upper level elective)) and augmented throughout the curriculum

via lectures in other courses and laboratory experiments.

	College or Univers	ity Unive	ersity of Tex	as at Dallas L	vate 3/30,	/200/
11.	Undergraduate Research: Is undergraduate research us Yes If yes, is a compre No If no, please go to a. Please submit a sampling students), representative each. Number submitted b. Participation in undergrad students who have enrolle Number of Graduates certified, all degree co Chemistry Department	ehensive write item 11b of the requiby discipline 5 (5 maxed in more the centrations to Involved	red, comprehens and faculty, with eximum). Should the during the last nan one semested non- from the	ive research reports on the grade the student we return these report five years. Please do not research.	r theses (pre received inc ts? Yes ☐ not double c	dicated on No ⊠ ount
			, ,			
12.	Laboratory Facilities:					
	a. Are the following laboratory fa	acilities adec	quate for your ins	tructional program:		
	Safety Shower(s) Eye Wash(es) Fire Extinguisher(s)	Yes ⊠ Yes ⊠ Yes ⊠	No	Hoods Ventilation	Yes ⊠ Yes ⊠	No 🗌 No 🗍
	b. Does the department/university	itv have:				
	Established Safety Rules	Yes ⊠	No 🗌	Emergency Reporting Procedures	Yes 🖂	No 🗌
	c. Are there adequate facilities a	and arranger	ments for disposa	al of chemical waste?	Yes ⊠	No 🗌
	d. If no is checked for any of the response with item 13.	above, plea	ase explain. If yo	u need more room ple	ase include	your
13.	Please comment on the adequa program.	cy of the fac	cilities and space	available for the under	graduate ch	emistry

	·
14.	 a. Please complete Appendix B (Instrumentation). In each case, please list the instrument(s) used by undergraduates in the curriculum required for certification. b. Please comment on the adequacy and condition of your equipment. Equipment is more than adequate for Undergraduate instruction & research
	Equipment is more than adequate for olidergraduate instruction a research
15.	How is lab safety taught to undergraduates (check appropriate items)?
	Dedicated course in laboratory safety Introduction to all chemistry laboratories In research and/or independent study Student participation in safety committees □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
16.	If your department does not have a full listing of faculty in the ACS Directory of Graduate Research, please provide Faculty Personal History Record forms (blank copy enclosed) for all faculty member hired in the last five years and currently on your faculty. Also, if your department is not listed in the Directory, please provide a list of all faculty and student publications in the last five years. No publications in the last five years
	No new faculty members in the last five years
17.	Please outline and comment on (in as much detail as you wish) changes in the last five years in faculty, facilities, support personnel, curriculum, capital equipment, professional development, and any other items

University of Texas at Dallas

College or University

Date 3/30/2007

17. Please outline and comment on (in as much detail as you wish) changes in the last five years in faculty, facilities, support personnel, curriculum, capital equipment, professional development, and any other items related to your program that you believe would be of interest to CPT. We would be especially interested in any new programs you are about to undertake. Attach additional sheets, if necessary.

Also, SEND US TWO COMPLETE COPIES OF YOUR CURRENT COLLEGE CATALOG.

Two new faculty have been added (bioorganic, computational chemistry); one retirement (physical organic). A new faculty member (organic/polymer) will be joining in Fall 2007). New instrumentation that has been added in the past five years includes a fluorescene plate reader (2005), a raman spectrophotometer (2004) and a near-ir process spectrophotometer. Upgrades and additions to FTIR, HPLC, UV/Vis and NMR facilities are in progress.

Table I. List below all required courses in your chemistry CORE in the sequence suggested for certified students. Refer to pgs. 6-7 in the 2003 ACS guidelines for the ACS definition of CORE courses.

Course	Course Title	Total Hours ¹		Textbook and Author ²		Integrated Core Material % Breakdown ³					
Number	Course Time	Class	Lab	Toxibook and haire	⊀R*	Α	В		0	Р	
CHEM 103	General Chemistry	45	45	Chemistry: The Central Science, 9th ed. Brown, T.L.; et. al.	1	20	20	20	20	20	
1311	General Chemistry I	45	0	Chemistry: Matter and Its Changes, 4th ed., Brady and Senese	1	10	10	35	10	35	
1111	General Chemistry Lab I	0	45	General Chemistry Laboratory Manual	1	10	10	35	10	35	
1312	General Chemistry II	45	0	Chemistry: Matter and Its Changes, 4th ed., Brady and Senese	1	10	10	35	10	35	
1112	General Chemistry Lab II	0	45	General Chemistry Laboratory Manual	1	10	10	35	10	35	
2401	Introductory Quantitative Methods in Chemistry	30	90	Quantitative Chemical Analysis, 7th ed, Harris	2	100					
2323	Introductory Organic Chemistry I	45	0	Organic Chemistry, 6th ed. & Solution Manual, Wade	2		10		90		
2123	Introductory Organic Chemistry Lab I	0	60	Introduction to Organic Laboratory Techniques:A Micoscale Approach,4th ed., Pavia,Lampman,Kriz & Engel	2		10		90		
2325	Introductory Organic Chemistry II	45		Organic Chemistry, 6th ed. & Solution Manual, Wade	2		15		85		
2125	Introductory Organic Chemistry Lab II	0	60	Organic Laboratory Techniques:A Micoscale Approach 3rd ed., Pavia,Lampman,Kriz & Engel	2		15		85		
3341	Inorganic Chemistry I	45	0	Inorganic Chemistry, 3rd ed., Miessier, Tarr	3			100			
3321	Physical Chemistry I	60	0	Physical Chemistry: Principles and Applications in Biological Sciences, 4th ed., Tinoco, Sauer, Wang,	3					100	
3322	Physical Chemistry II	45	0	Physical Chemistry: Principles and Applications in Biological Sciences, 4th ed., Tinoco, Sauer, Wang,	3					100	
3471	Advanced Chemical Synthesis	30	90	Organic Chem Lab Survival Manual, 5th ed., Zubrick	3			50	50		

^{1.} Total Hours refers to actual/total contact hours per term. Do not record credit hours or contact hours per week.

^{2.} If no textbook is listed, please send course syllabi and examinations if given.

^{3.} If course titles are ambiguous or if courses cover more than one core area, please apportion approximately those courses to the five areas: Analytical and Instrumental (A), Biochemistry (B), Inorganic (I), Organic (O), and Physical (P). If you use an integrated approach to cover core topics (classroom or lab work), please send course syllabi and examinations.

^{*}Recommended Year

Table I, Cont'd. List below all required courses in your chemistry CORE in the sequence suggested for certified students. Refer to pgs. 6-7 in the 2003 ACS guidelines for the ACS definition of CORE courses.

Course	Course Title	Total Hours ¹		Textbook and Author ²		Integrated Core Material % Breakdown ³				
Number		Class	Lab		YR,	Α	В	Ī	0	Р
3472	Instrumental Analysis	30 120		Principles of Instrumental Analysis, 5th ed., Skoog, Holler, Nieman	3	100				
4473	Physical Measurements	30	90	Lab Book: "Roaring Springs Composition Book", Quad. Rules 5 to 1"	4					100

^{1.} Total Hours refers to actual/total contact hours per term. Do not record credit hours or contact hours per week.

^{2.} If no textbook is listed, please send course syllabi and examinations if given.

^{3.} If course titles are ambiguous or if courses cover more than one core area, please apportion approximately those courses to the five areas: Analytical and Instrumental (A), Biochemistry (B), Inorganic (I), Organic (O), and Physical (P). If you use an integrated approach to cover core topics (classroom or lab work), please send course syllabi and examinations.

^{*}Recommended Year

Table II. ADVANCED Courses Used for Certification. List below only those courses in your chemistry program that are used to fulfill the requirement of "six semester hours of advanced courses that include sufficient laboratory work to bring the total number of laboratory hours to 500" (pg. 7, 2003 ACS guidelines). Do not include ACS-defined CORE courses in this table.

Course Number	Course Title	Total H	Hours ¹	Textbook and Author ²	P.Chem Prereq? Y or N ³
	ADVANCED courses used for certificati		Lab		TOLIN
CHEM 480	Organic Reaction Mechanisms	45	0	Advanced Organic Chemistry Part A: Structure and Mechanisms, 4th ed. Carey, F.A.; Sundberg, R.J.	N
3361	BioChemistry I	45	0	BioChemistry, 3rd ed., Garrett & Grisham	N
4V91	Research in Chemistry	0	360	Individual Research Projects	N
Elective A	ADVANCED courses used for certification	n			
To be cert	ified students must select 1 cours	es or		credit hours from the below list	
3362	BioChemistry II	45	0	BioChemistry, 3rd ed., Garrett & Grisham	N
4335	Polymers	45	0	Polymers Chemistry, 3rd ed., Stevens	Y

^{1.} Total Hours refers to total contact hours per term. Do not record credit hours or contact hours per week.

^{2.} If no textbook is listed, please send course syllabi and examinations if given.

^{3.} Please send your most recent syllabi and examinations for all chemistry courses in Table II that do not have a physical chemistry prerequisite.

College or University University of Texas at Dallas Date 3/30/2007

Table III. Cognate Courses (physics, mathematics, biology, and computer science) required for certified students.

Course	Course Title	Total	Hours	Department	Recommended
Number	Course Time	Class	Lab	Борантон	Year
2417	Calculus I	60	0	Mathematics	2
2419	Calculus II	60	0	Mathematics	2
2418	Linear Algebra	60	0	Mathematics	2
2451	Multivariable Calculus	60	0	Mathematics	2
2325&2 125	Mechanics & Heat	45	45	Physics	2
2326&2 126	Electromagnetism & Waves	45	45	Physics	2
3332	Statistics	45	0	Statistics	3

Table IV. Teaching Loads. Please provide below the current teaching load (actual hours per week) for each faculty member involved in undergraduate instruction (use all available space – multiple faculty per page). Please list part-time, adjunct, and temporary faculty last and identify them with asterisks. Do not include graduate teaching assistants in this listing. If the average teaching load for your department is less than 12 contact hours per week, only complete Table IV for those individual faculty members with greater than 12 contact hours per week. Additional copies of pages 10 and 11 are available at the five-year report website.

Fall/1st Quarter – Year 2006 Spring Semester/ 2nd Quarter – Year 2007

Faculty Member (list according to rank)	Catalog Number and Course Title	1*	2*	3*	Catalog Number and Course Title	1*	2*	3*
Grimes, Bob	CHEM 301 - Physical Chemistry I	9	3	12	CHEM 302 - Physical Chemistry II	9	6	15
Smith, John	CHEM 201 - Organic Chemistry I	6	7	13	CHEM 202 - Organic Chemistry II	7	7	14
Dr. Sandhya Gavva	CHEM 1111 - General Chemistry Lab I	4	11	15	CHEM 1112 - General Chemistry Lab II	3	9	12
Dr. Sandhya Gavva	CHEM 1112 - General Chemistry Lab II	1	3	4	CHEM 1312 - General Chemistry II	3	0	3
Dr. Sergio Cortes	CHEM 2123 - Intro. Organic Chemistry Lab I	2	8	10	CHEM 2123 - Intro. Organic Chemistry Lab I	1	4	5
Dr. Sergio Cortes	CHEM 2125 - Intro. Organic Chemistry Lab II	1	4	5	CHEM 2125 - Intro. Organic Chemistry Lab II	2	7	9
Dr. Sergio Cortes					CHEM 2323 - Intro. Organic Chemistry I	3	0	3

^{*1} Number of class hours scheduled per week.

^{*2} Number of contact hours of laboratory per week.

^{*3} Total of columns 1 and 2 for a grand total for each faculty member.

College or University University of Texas at Dallas Date 3/30/2007

Table IV. Teaching Loads. Please provide below the current teaching load (actual hours per week) for each faculty member involved in undergraduate instruction (use all available space – multiple faculty per page). Please list part-time, adjunct, and temporary faculty last and identify them with asterisks. Do not include graduate teaching assistants in this listing. If the average teaching load for your department is less than 12 contact hours per week, only complete Table IV for those individual faculty members with greater than 12 contact hours per week.

3*

^{*1} Number of class hours scheduled per week.

^{*2} Number of contact hours of laboratory per week.

^{*3} Total of columns 1 and 2 for a grand total for each faculty member.

Appendix A

Appendix A					
Journal	Print	Online	Journal	Print	
Accounts of Chemical Research			Organic and Biomolecular Chemistry	П	
Analytical Chemistry		Image: second control of the control	Organic Letters		
Angewandte Chemie International Edition			Organometallics		
Applied Spectroscopy			Physical Chemistry Chemical Physics		
Biochemical Journal		\boxtimes	Proceedings of the National Academy of Sciences		
Biochemistry		M	Pure and Applied Chemistry	П	
Bioconjugate Chemistry		\boxtimes	Science		
Bioorganic Chemistry		\boxtimes	Spectrochimica Acta		
Canadian Journal of Chemistry		\square	Tetrahedron		
Chemical Communications			Tetrahedron Letters		
Chemical Physics Letters			Trends in Biochemical Sciences		
Chemical Reviews					
Chemical Society Reviews		\boxtimes			
Chemistry - A European Journal					
Chemistry and Biology		\square			
Chemistry Letters (Japan)		\square			
Chemistry of Materials		\boxtimes			
Dalton Transactions		\boxtimes			
Environmental Science & Technology					
European Journal of Biochemistry		\boxtimes			
European Journal of Inorganic Chemistry		\boxtimes			
European Journal of Organic Chemistry		\boxtimes			
Faraday Discussions		\boxtimes			
Helvetica Chimica Acta					
Industrial & Engineering Chemistry Research		\boxtimes			
Inorganic Chemistry		\boxtimes	Dold titles are from the		
Inorganica Chimica Acta			Bold titles are from the (
Journal of Biological Chemistry		\boxtimes	Content list. For a detai		
Journal of Biological Inorganic Chemistry		\boxtimes	of the CPT Library Guid	elines vis	
Journal of Catalysis			CPT web page at:		
Journal of Chemical Education		\boxtimes			
Journal of Chemical Information & Computer Modeling			http://chemistry.org/	educatio	
Journal of Chemical Information & Computer Computation					
Journal of Chemical Physics	\perp				
Journal of Chromatography					
Journal of Coordination Chemistry		\boxtimes			
Journal of Electroanalytical Chemistry		\boxtimes			
Journal of Medicinal Chemistry		\boxtimes			
Journal of Molecular Biology		\boxtimes]		
Journal of Organic Chemistry			7		
Journal of Organometallic Chemistry			1		
Journal of Physical Chemistry A			1		
Journal of Physical Chemistry B			1		
Journal of Polymer Science	 		1		
Journal of the American Chemical Society	 		1		
Langmuir	$+$ \vdash		1		
Massassassassassassassassassassassassass	+		4		

Macromolecules

Nature

Magnetic Resonance in Chemistry

Nature – Structural Biology New Journal of Chemistry

neral lanation isit the

Online

on/cpt

Appendix B

If you have more than one of a particular instrument, please list it in the space directly under the first.

Instrument	Used by Under- graduates	Date of Acquisition	Manufacturer and Model
NMR Spectrometer(s)		8/26/1998	JEOL Eclipse 270 H & C
		8/26/1998	JEOL Ecipse 270Multinuclear
UV-Vis Spectrometer(s)		8/27/1997	Shimadzu UV-160PC
Con Chromatagraph(a)		0/27/1007	Shimadau GG ON C 700F01
Gas Chromatograph(s)		8/27/1997	Shimadzu GC-8A & cr501 Integrator/Plotter
Liquid Chromatograph(s)			integrator/frotter
IR Spectrometer(s)		10/1/1997	Nicolet Avitar 360
Mass Spectrometer(s)			
	<u> </u>		
Radiochemistry (including counting equip. and sources)			
Atomic Absorption Flows Emission		0/15/1004	Vanian Oraștua 3 5
Atomic Absorption, Flame Emission		8/15/1994	Varian Spectra A-5
Thermal Analysis Equipment			
Thermal Analysis Equipment	<u> </u>		
Gel Electrophoresis			
-			
Electrochemical Instrumentation		2/10/1998	Cypress Systems 2R
			Potentiostat
GC-Mass Spectrometer(s)			
Additional Instruments:	N-4	1	
HPLC		2/10/1998	Hewlett Packard Series 1100
Tanka and a Carabana bana		2 / 2 / 1 0 0 0	Dealer Flores IGEOR
Luminescence Spectrometer		2/9/1998	Perkin Elmer LS50B
Fluorescence Plate Reader		4/20/2005	Molecular Devices GeminiXPS
Truoressense frute Neuter		1, 20, 2003	Merceurar Bevrees Gemining
Raman Spectrophotometer		2004	Deltanu, Advantage 200A
Near IR Process Spetrophotometer		2002	LT Ind. Quantum 1200 Plus
		+	
	 	+	