

**CERTIFICATION INFORMATION FOR CHEMISTS**

**I. DEGREES WITH MAJOR IN CHEMISTRY AWARDED BETWEEN JULY 1, 2017 and JUNE 30, 2018.**

A "Major" in Chemistry, for the purpose of this report, is defined as a Bachelor's graduate who has successfully completed a degree program, the determination and control of which is the administrative responsibility of the chemistry or other approved department, and a program that also meets requirements for a "Major" concentration as established by the institution granting the degree.

DEGREE LEVEL	Total	Male	Female	U.S. Citizens						Non-U.S. Citizens	Unknown
				Black/African American	Asian American	Native American	Hispanic/Latinx	White Non-Hispanic			
<b>Bachelor's, Certified to ACS</b>											
Chemistry (all degrees excluding Biochemistry)	8	5	3	Please provide ethnicities of all graduates Certified to ACS.							
				0	0	0	2	12	1	4	
Biochemistry	11	7	4								
<b>Bachelor's, Not Certified to ACS</b>											
Chemistry (all degrees excluding Biochemistry)	4	3	1	Please provide ethnicities of all graduates Not Certified to ACS.							
				0	0	0	1	3	0	0	
Biochemistry	0	0	0								
<b>Master's</b>	6	3	3	1	1	0	1	2	1	0	
<b>Ph.D</b>	-	-	-	-	-	-	-	-	-	-	

\* Please be sure that the figures provided above agree with the numbers of the names listed on the Records of Graduates page.  
 \* Ethnicity data is required. The total of all ethnicity numbers must equal the Total count of graduates (Chemistry + Biochemistry for both Bachelor sections).

- 1) Does your department offer a Master's degree in Chemistry? Y  
 2) Does your department offer a Ph.D. degree in Chemistry? N

**II. GRADUATE STUDENT ENROLLMENT IN CHEMISTRY, FALL OF 2017**

	Full-Time		Part-Time	
a. All graduate students:	Male	<u>6</u>	Male	<u>1</u>
	Female	<u>6</u>	Female	<u>0</u>
b. First-year graduate students:	Male	<u>5</u>	Male	<u>0</u>
	Female	<u>2</u>	Female	<u>0</u>
c. Total minority graduate students (U.S. citizens):	Total	<u>5</u>	Total	<u>0</u>
d. Total foreign graduate students:	Total	<u>1</u>	Total	<u>0</u>

**III. FACULTY AND UNDERGRADUATES INFORMATION, FALL OF 2017**

a. Chemistry Faculty Information:			
	<b>Total</b>	<b>Male</b>	<b>Female</b>
Full-time, tenure-track/tenured	<u>11</u>	<u>8</u>	<u>3</u>
Full-time, permanent instructional staff	<u>4</u>	<u>3</u>	<u>1</u>
All Others (full-time equivalents)	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
b. Total undergraduate enrollment at your university/college:	<u>12,080</u>		

**2017 - 2018**  
**SUPPLEMENTAL INFORMATION TO BE REPORTED ANNUALLY**  
**BY ACS-APPROVED PROGRAMS**

NAME OF UNIVERSITY/COLLEGE Central Washington University

**I. FOUNDATION COURSES**

List the classroom and lab course(s) that can be used to satisfy the requirement for foundation course work. Please refer to the 2016 ACS Guidelines, pages 11-12 for a more detailed description. If a course contributes to more than one foundation area, please apportion the contact hours.

	Course Catalog Number	Course Title	Total Contact Hours Per Academic Term		Offered (Y or N)	Course Enrollment
			Class	Lab		
Analytical Chemistry	Chem332	Quantitative Analysis	30		Y	>10
	Chem332L	Quantitative Analysis Lab		60	Y	>10
Biochemistry	Biol 321	Genetics	40	20	Y	>10
	Chem 431	Biochemistry 1	30		Y	>10
	Chem431L	Biochemistry Lab 1		60	Y	>10
Inorganic Chemistry	Chem 350	Inorganic Chemistry	30		Y	>10
Organic Chemistry	Chem 361	Organic Chemistry 1	30		Y	>10
	Chem361L	Organic Chemistry Lab 1		60	Y	>10
	Chem362	Organic Chemistry 2	30		Y	>10
Physical Chemistry	Chem 381	Physical Chemistry (Thermo)	50		Y	>10

**II. IN-DEPTH COURSES**

List the classroom and lab courses that can be used to satisfy the requirement for in-depth course work for the certification of students. In-depth courses build on prerequisite foundation course work. Please refer to the 2016 ACS Guidelines, page 12 for a more detailed description.

	Course Catalog Number	Course Title	Total Contact Hours Per Academic Term		Offered (Y or N)	Course Enrollment
			Class	Lab		
	Biol 323	Microbiology	20	60	Y	>10
	Biol 425	Molecular Biotechnology	20	60	Y	>10
	Biol 430	Cell Biology	40	30	Y	>10
	Chem 345	Environmental Chemistry	30	60	Y	>10
	Chem 363	Organic Chemistry 3	30		Y	>10
	Chem 382	Physical Chemistry 2	30		Y	>10
	Chem 432	Biochemistry 2	30		Y	>10
	Chem 433	Biochemistry 3	30		Y	>10
	Chem 452	Instrumental Analysis	30	60	Y	>10
	Chem 473	Transition Metals	30		N	0
	Chem 488	Colloquium	10		Y	>10
	Chem 492	Lab Experience in Teaching Chem	10	30	Y	>10
	Chem 505	Current Topics in Chemistry	10		Y	>10
	Chem 512	Biochemical Toxicology	30		Y	8
	Chem 550	Advanced Analytical Chemistry	30		Y	9
	Chem 567	Physical Organic Chemistry	30		Y	9
	Chem 581	Quantum and Computational Chem	30		Y	6
	Chem363L	Organic Chemistry Lab 3		60	Y	>10
	Chem382L	Integrated Lab 1		60	Y	>10

Chem383	Physical Chemistry 3	30	Y	>10
Chem383L	Integrated Lab 2		Y	<b>10</b>

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**II. IN-DEPTH COURSES (continued)**

Course Catalog Number	Course Title	Total Contact Hours Per Academic Term		Offered (Y or N)	Course Enrollment
		Class	Lab		
Chem433L	Biochemistry Lab 2		60	Y	>10

**III. RESEARCH**

Course Catalog Number	Course Title	Total Contact Hours Per Academic Term		Offered (Y or N)	Course Enrollment
		Class	Lab		
Chem 295	Research		30	Y	<b>10</b>
Chem 395	Research		30	Y	>10
Chem 490	Cooperative Education		30	Y	<b>0</b>
Chem 495	Senior Research		30	Y	>10

## Chemistry Staff List

### COLL/UNIV **Central Washington University**

The chemistry staff list will show all faculty and instructional staff including those that are retired, separated, and other.

Name	Training	Specialization	Rank						Part Time or Temp		Status					
			Adj	Lect	Instr	Asst	Asso	Prof	PT	Temp	Emp	Sep	Ret	Dec	Other	
Bullock, Eric	Bach: University of Washington Mast: PhD: University of Hawaii	Physical Surface Chemistry	2001			2002				-	-	2001	2007			
Cornell, Caitlyn	Bach: Carleton College Mast: Central Washington University PhD:	Chemistry/Science Education	2009							X	-	2009	2009			
Lygre, David	Bach: Concordia College Mast: PhD: University of North Dakota	Biochemistry	2009			1970	1973	1980		-	-	1970	2009	2008		
Best, Brittany	Bach: Central Washington University Mast: Central WA University PhD:	* Graduate Assistant	2010							X	-	2010	2010			
Magonski, Jozef	Bach: Jagiellonian University Mast: PhD: University of Gdansk, Poland	General		2005						-	X	2005	2010			
Olsen, Kristopher	Bach: Central Washington University Mast: Central Washington Univ. PhD:	* Graduate assistant	2009							X	-	2009	2010			
Helland Jr., Terry	Bach: University of Washington Mast: IP - Central Washington Univ. PhD:	* Graduate Assistant	2011							X	-	2011	2011			
Sarca, Viorel	Bach: Babes-Bolyai University Mast: Babes-Bolyai University PhD: Babes-Bolyai University	Organic		2010						-	X	2010	2011			
Goeden, Terrah	Bach: University of Washington Mast: Central Washington Univ. PhD:	* Graduate Assistant	2010							X	-	2010	2012			
Rosario, Sara	Bach: Central Washington Univ Mast: Central Washington Univ PhD:	Biochemistry * Graduate assistant	2012							-	X	2012	2012			
Shore, T. Cameron	Bach: Central Washington University Mast: Central Washington Univ. PhD:	* Graduate Assistant	2011							X	-	2011	2012			
Abbey, Eric	Bach: Whitman College Mast: University of Oregon PhD: University of Oregon	Organic		2012						-	X	2012	2013			

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Carter, John	Bach: University of Washington Mast: Central Washington Univ. PhD:	* Graduate Assistant	2011							X	-	2011	2013			
Chen, Bing-Lin	Bach: National Taiwan Normal Univ Mast: Michigan State University PhD: Michigan State University	Chemistry Organic Chemical Engineering		2010						-	X	2010	2013			
Nye, Jesse	Bach: Central Washington University Mast: Central Washington University PhD:	Organic	2011							X	-	2011	2013			
Sigurjonsson, Kristin	Bach: Central Washington Univ Mast: Central Washington Univ PhD:	Organic * Graduate Assistant	2012							-	X	2012	2013			
Bullock, Jeff	Bach: Western Washington University Mast: Western Washington University PhD: IP: Washington State Univ.	General		2013						-	X	2013	2014			
Frank, Michael	Bach: Central Washington University Mast: IP - Central Washington Univ PhD:	* Graduate Assistant	2013							X	-	2013	2014			
Hinz, Daniel	Bach: Central Washington University Mast: IP - Central Washington Univ. PhD:	* Graduate Assistant	2014							X	-	2014	2014			
Siegenthaler, James	Bach: Central Washington University Mast: Central Washington Univ. PhD:	* Graduate Assistant	2014							X	-	2014	2014			
Chamberland, Stephen	Bach: Boston College Mast: PhD: University of CA, Irvine	Organic Synthetic	2008			2008				-	-	2008	2015			
Fadeeva, Tatiana	Bach: Mast: Moscow Inst of Fine Chem Tech PhD: Rutgers University	Analytical		2012						-	X	2012	2015			
Kim, Young	Bach: University of Mississippi Mast: PhD: University of Mississippi	Organic		2013						-	X	2013	2015			
Malmberg, Christopher	Bach: Central Washington University Mast: Central Washington University PhD:	Organic * Graduate Assistant	2015							X	-	2015	2015			

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Brewer, Alex	Bach: Haskell Indian Nations Univ. Mast: University of Oklahoma PhD: Oregon State University	Environmental		2015						-	X	2015	2016			
Gillman, Cody	Bach: Central Washington University Mast: IP- Central Washington Univ PhD:	Biochemistry * Graduate Assistant	2015							X	-	2015	2016			
Hoene, Becca	Bach: Central WA University Mast: IP-Central WA University PhD:	* Graduate Assistant	2016							X	-	2016	2016			
Farah, Abdikani	Bach: Eastern Washington University Mast: IP-Central Washington Univ PhD:	Graduate Assistant	2017							X	-	2017	2017			
Long, Michael Scott	Bach: New Mexico Highlands Univ Mast: PhD: Pennsylvania State University	Analytical		2015						-	X	2015	2017			
Reichlin, William	Bach: Central WA University Mast: IP-Central WA University PhD:	Graduate Assistant	2016							X	-	2016	2017			
Coates, Rebecca	Bach: Carroll College Mast: N/A PhD: University of Utah	Analytical		2017						-	X	2017	2018			
Kaiser, Caleb	Bach: Central WA University Mast: IP-Central WA University PhD:	Graduate Assistant	2017							X	-	2017	2018			
Troth, Kaylee	Bach: Central Washington Univ Mast: Central Washington Univ PhD:	Chemistry	2018							X	-	2018	2018			
Rittenhouse, Robert	Bach: Atlantic Union College Mast: PhD: Worcester Polytechnic Inst.	Physical Senior Lecturer - 2013		2007						-	X	2007		2018		
Kurtz, Martha	Bach: Northern Arizona University Mast: University Wisconsin-Madison PhD: Arizona State University	Chemistry/Science Education Assigned as Associate Dean 6/2014, not in dept					1995	2001	2008	-	-	1995				
Thomas, Carin	Bach: Humboldt State University Mast: Humboldt State University PhD: University of Nevada-Reno	Biochemistry Toxicology					1995	2001	2010	-	-	1995				

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			Adj	Lect	Instr	Asst	Asso	Prof	PT	Temp	Emp	Sep	Ret	Dec	Other		
Brown, Anthony	Bach: Central Washington University Mast: Central Washington University PhD:	Chemistry Instructional and Classroom Technician 4			2007						X	-	1996				
Peters, JoAnn (DeLuca)	Bach: Antioch College Mast: PhD: Harvard University	Organic Physical organic					1996	2001			-	-	1996				
Diaz, Anthony	Bach: University of Washington Mast: Western Washington University PhD: Oregon State University	Inorganic Solid-State				2000	2005	2010			-	-	2000				
Johansen, Anne	Bach: University of Oslo, Norway Mast: University of Oslo, Norway PhD: California Institute of Tech.	Analytical Environmental	2000			2002	2008	2013			-	-	2000				
Fabry-Asztalos, Levente	Bach: Washington State University Mast: Washington State University PhD: Washington State University	Organic Medicinal				2003	2009	2014			-	-	2003				
Sorey, Tim	Bach: Eastern Oregon University Mast: PhD: Montana State University	Analytical Chemistry/Science Education				2004	2010				-	-	2004				
Rivera, Dion	Bach: California Polytechnic S.L.O. Mast: PhD: University of Utah	Analytical Physical				2006	2012	2017			-	-	2006				
Belofsky, Gil	Bach: Carnegie Mellon University Mast: Colorado State University PhD: The University of Iowa	Organic Natural Products				2008	2014				-	-	2008				
Ge, Yingbin	Bach: Univ of Scie & Tech of China Mast: University of Hawaii at Manoa PhD: University of Hawaii at Manoa	Physical Computational				2008	2014				-	-	2008				
Kroll, Todd	Bach: Eastern Washington University Mast: PhD: University of Notre Dame	Biochemistry				2009	2015				-	-	2009				
Swain, Paul Whitney	Bach: Indiana University Mast: PhD: University of Montana	Biochemistry Organic		2013							-	X	2013				
Beng, Timothy	Bach: University of Buea Mast: East Tennessee State Univ. PhD: University of Arkansas	Organic				2015					-	-	2015				



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Ricketson, Derek	Bach: Mississippi State University Mast: PhD: University of Oregon	Biochemistry		2015						-	X	2015				
Groce, Lindsay	Bach: Central Washington Univ Mast: Central Washington Univ PhD:	Chemistry	2018							X	-	2018				
Hansen, Nicholas	Bach: Central Washington Univ Mast: IP - Central Washington Univ PhD:	Graduate Assistant	2018							X	-	2018				
Johnson, Camden	Bach: Central Washington Univ Mast: IP - Central Washington Univ PhD:	Graduate Assistant	2018							X	-	2018				

## ACS Committee on Professional Training

### 2018 Programmatic Impacts of the 2015 ACS Guidelines Survey

Your responses to these questions are strictly confidential. The data from this survey will be used in aggregate to inform discussions regarding future revisions to the ACS guidelines for Bachelor's Degree Programs and will be published in the CPT Newsletter.

College/University Name: Central Washington University

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1) Have you made any changes to your program in response to the 2015 Guidelines?

- a.) Yes  
 b.) No

2) If YES to question 1, please check all that apply:

- Introduced a lecture-focused course on a different subject (provide course title):
- Introduced a new laboratory-based course (provide course title):
- Modified content of one or more classes in response to the synthetic polymers, biological macromolecules, supramolecular aggregates, and meso- or nanoscale (MSN) materials requirement
- Introduced a capstone experience
- Acquired more instrumentation
- Increased the level of skills development in the curriculum
- Increased the safety culture in the department
- Other (please describe):

3) The 2015 Guidelines adjusted the maximum contact hours for individuals teaching exclusively in the laboratory from 15 to 16 and allowed individuals to teach up to 18 (rather than 17) contact hours in a single semester or quarter assuming that the average over all academic terms did not exceed 15. How has this change impacted your program?

- a.) No effect  
 b.) It has provided greater flexibility in our teaching assignments  
 c.) It has led to an increase in the teaching responsibilities of our faculty

4) The 2015 Guidelines increased the minimum number of faculty in an approved program from four to five. This change, once it is implemented,

- a.) Will have no effect on our program as we already have more than four faculty  
 b.) Has allowed us to gain permission from our administration to hire an additional faculty member  
 c.) Has allowed us to hire an additional faculty member  
 d.) Will make it difficult for our program to maintain approval