AMERICAN CHEMICAL SOCIETY

COMMITTEE ON PROFESSIONAL TRAINING 1155 16th Street, N.W. Washington, D.C. 20036 (202) 872-4589

COLL/UNIV Central Washington University

DEPT CHAIR Dr. Anthony Diaz DATE August 4, 2016

CERTIFICATION INFORMATION FOR CHEMISTS

I. DEGREES WITH MAJOR IN CHEMISTRY AWARDED BETWEEN JULY 1, 2015 and JUNE 30, 2016.

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.

U.S. Citizens

| DEGREE LEVEL | Total | Male | Female | African American | Asian American | Native American | Hispanic American | White Non- Hispanic | Non-U.S. Citizens U | Jnknown |
|--|-------|------|--------|---------------------|-------------------|--------------------|----------------------|---------------------------|------------------------|---------|
| Bachelor's, Certified to ACS | | | | | | | | | | |
| Chemistry (all degrees excluding Biochemistry) | 11 | 6 | 5 | | Pleas | e provide ethnic | ities of all gradu | uates Certified to | ACS. | |
| | | | İ | 0 | 1 | 0 | 2 | 10 | 0 | 3 |
| Biochemistry | 5 | 3 | 2 | | | | | | | |
| Bachelor's, Not Certified to ACS | | | | | | | | | | |
| Chemistry (all degrees excluding Biochemistry) | 1 | 0 | 1 | | Please | provide ethnicitie | es of all graduat | es Not Certified | to ACS. | |
| | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Biochemistry | 0 | 0 | 0 | | | | | | | |
| Master's | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| Ph.D | - | - | -] | <u> </u> | - | | - | | - | - |

- * 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?
- 2) Does your department offer a Ph.D. degree in Chemistry?
- Ν

II. GRADUATE STUDENT ENROLLMENT IN CHEMISTRY, FALL OF 2015

| | Fu | ull-Time | Pa | art-Time |
|--|--------|----------|--------|----------|
| a. All graduate students: | Male | 7 | Male | 5 |
| | Female | 3 | Female | 0 |
| b. First-year graduate students: | Male | 4 | Male | 0 |
| | Female | 0 | Female | 0 |
| c. Total minority graduate students (U.S. citizens): | Total | 0 | Total | 1 |
| d. Total foreign graduate students: | Total | 3 | Total | 1 |

III. FACULTY AND UNDERGRADUATES INFORMATION, FALL OF 2015

a. Chemistry Faculty Information:

| | Total | Male | Female |
|--|-------|------|--------|
| Full-time, tenure-track/tenured | 11 | 8 | 3 |
| Full-time, permanent instructional staff | 5 | 5 | 0 |
| All Others (full-time equivalents) | 0.00 | 0.00 | 0.00 |
| | | | |

b. Total undergraduate enrollment at your university/college:

11,112

2015 - 2016 SUPPLEMENTAL INFORMATION TO BE REPORTED ANNUALLY BY ACS-APPROVED PROGRAMS

NAME OF UNIVERSITY/COLLEGE Central Washington University

I. FOUNDATION COURSES

List the course(s) that can be used to satisfy the requirement for foundation course work. Please refer to the 2015 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 | | Total Cont | act Hours | | |
|----------------------|----------|-----------------------------|------------|-----------|----------|------------|
| | Catalog | | Per Acade | mic Term | Offered | Course |
| | Number | Course Title | Class | Lab | (Y or N) | Enrollment |
| Analytical Chemistry | Chem 332 | Quantitative Analysis | 30 | | Υ | >10 |
| | Chem332L | Quantitative Analysis Lab | | 60 | Υ | >10 |
| Biochemistry | Biol 321 | Genetics | 40 | 20 | Υ | >10 |
| | Chem 431 | Biochemistry 1 | 30 | | Υ | >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 | | Υ | >10 |
| | Chem 362 | Organic Chemistry 2 | 30 | | Υ | >10 |
| | Chem361L | Organic Chemistry Lab 1 | | 60 | Y | >10 |
| Physical Chemistry | Chem 381 | Physical Chemistry (Thermo) | 50 | | Y | >10 |

II. IN-DEPTH COURSES

List the 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 2015 ACS Guidelines, page 12 for a more detailed description.

| Course | | Total Conta | | • | |
|----------|---------------------------------|-------------|-----|----------|-----------|
| Catalog | | Per Acade | | Offered | Course |
| Number | Course Title | Class | Lab | (Y or N) | nrollment |
| Biol 323 | Microbiology | 20 | 60 | Y | >10 |
| Biol 425 | Molecular Biotechnology | 20 | 60 | Υ | >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 383 | Physical Chemistry 3 | 30 | | Y | >10 |
| Chem 432 | Biochemistry 2 | 30 | | Υ | >10 |
| Chem 433 | Biochemistry 3 | 30 | | Υ | >10 |
| Chem 452 | Instrumental Analysis | 30 | 60 | Υ | >10 |
| Chem 473 | Transition Metals | 30 | | N | 0 |
| Chem 488 | Colloquium | 10 | | Υ | >10 |
| Chem 492 | Lab Experience in Teaching Chem | 10 | 30 | Y | >10 |
| Chem 505 | Current Topics in Chemistry | 10 | | Υ | >10 |
| Chem 562 | Organic Spectroscopy | 30 | | Υ | 10 |
| Chem 564 | Medicinal Organic Chemistry | 30 | | Υ | 10 |
| Chem 571 | Solid State Chemistry | 30 | | Υ | 9 |
| Chem363L | Organic Chemistry Lab 2 | | 60 | Υ | >10 |
| Chem382L | Integrated Lab 1 | | 60 | Υ | >10 |
| Chem383L | Integrated Lab 2 | | 60 | Υ | >10 |

 Chem433L
 Biochemistry Lab 2
 60
 Y
 10

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NAME OF UNIVERSITY/COLLEGE Central Washington University

III. RESEARCH

| Course Catalog | | Total Conta Per Acade | | Offered | Course |
|-------------------|-----------------------|--------------------------|-----|-------------------|-----------|
| Number | Course Title | Class | Lab | <u>(Y or N)</u> E | nrollment |
| Chem 295 | Research | | 30 | Y | >10 |
| Chem 395 | Research | | 30 | Y | >10 |
| Chem 490 | Cooperative Education | | 30 | Y | 1 |
| Chem 495 | Senior Research | | 30 | Υ | >10 |

COLL/UNIV Central Washington University

| Name | Training | Specialization | Rank | | | | | | | ime or mp | 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 | | | | | | Х | 1 | 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 | | | | | | Х | - | 2010 | 2010 | | | | |
| Magonski, Jozef | Bach: Jagiellonian University Mast: PhD: University of Gdansk, Poland | General | | 2005 | | | | | - | Х | 2005 | 2010 | | | | |
| Olsen, Kristopher | Bach: Central Washington University Mast: Central Washington Univ. PhD: | * Graduate assistant | 2009 | | | | | | Х | - | 2009 | 2010 | | | | |
| Helland Jr., Terry | Bach: University of Washington Mast: IP - Central Washington Univ. PhD: | * Graduate Assistant | 2011 | | | | | | Х | - | 2011 | 2011 | | | | |
| Sarca, Viorel | Bach: Babes-Bolyai University Mast: Babes-Bolyai University PhD: Babes-Bolyai University | Organic | | 2010 | | | | | - | Х | 2010 | 2011 | | | | |
| Goeden, Terrah | Bach: University of Washington Mast: Central Washington Univ. PhD: | * Graduate Assistant | 2010 | | | | | | Х | - | 2010 | 2012 | | | | |
| Rosario, Sara | Bach: Central Washington Univ Mast: Central Washington Univ PhD: | Biochemistry * Graduate assistant | 2012 | | | | | | - | Х | 2012 | 2012 | | | | |
| Shore, T. Cameron | Bach: Central Washington University Mast: Central Washington Univ. PhD: | * Graduate Assistant | 2011 | | | | | | Х | - | 2011 | 2012 | | | | |
| Abbey, Eric | Bach: Whitman College Mast: University of Oregon PhD: University of Oregon | Organic | | 2012 | | | | | - | Х | 2012 | 2013 | | | | |

COLL/UNIV Central Washington University

| Name | Training | Specialization | | | Ra | ank | | | | ime or emp | | | Status | i | |
|-----------------------|---|--|------|------|-------|------|------|------|----|---------------|------|------|--------|-----|-------|
| | | | Adj | Lect | Instr | Asst | Asso | Prof | PT | Temp | Emp | Sep | Ret | Dec | Other |
| Carter, John | Bach: University of Washington Mast: Central Washington Univ. PhD: | * Graduate Assistant | 2011 | | | | | | Х | - | 2011 | 2013 | | | |
| Chen, Bing-Lin | Bach: National Taiwan Normal Univ Mast: Michigan State University PhD: Michigan State University | Chemistry Organic Chemical Engineering | | 2010 | | | | | - | Х | 2010 | 2013 | | | |
| Nye, Jesse | Bach: Central Washington University Mast: Central Washington University PhD: | Organic | 2011 | | | | | | Х | - | 2011 | 2013 | | | |
| Sigurjonsson, Kristin | Bach: Central Washington Univ Mast: Central Washington Univ PhD: | Organic * Graduate Assistant | 2012 | | | | | | - | Х | 2012 | 2013 | | | |
| Bullock, Jeff | Bach: Western Washington University Mast: Western Washington University PhD: IP: Washington State Univ. | General | | 2013 | | | | | - | Х | 2013 | 2014 | | | |
| Frank, Michael | Bach: Central Washington University Mast: IP - Central Washington Univ PhD: | * Graduate Assistant | 2013 | | | | | | Х | - | 2013 | 2014 | | | |
| Hinz, Daniel | Bach: Central Washington University Mast: IP - Central Washington Univ. PhD: | * Graduate Assistant | 2014 | | | | | | Х | - | 2014 | 2014 | | | |
| Siegenthaler, James | Bach: Central Washington University Mast: Central Washington Univ. PhD: | * Graduate Assistant | 2014 | | | | | | Х | - | 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 | | | | | - | Х | 2012 | 2015 | | | |
| Kim, Young | Bach: University of Mississippi Mast: PhD: University of Mississippi | Organic | | 2013 | | | | | - | Х | 2013 | 2015 | | | |
| Malmberg, Christopher | Bach: Central Washington University Mast: Central Washington University PhD: | Organic * Graduate Assistant | 2015 | | | | | | Х | - | 2015 | 2015 | | | |

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| Name | Training | Specialization | | | Ra | ank | | | | ime or emp | | | Status | i | |
|-------------------------|--|--|------|------|-------|------|------|------|----|---------------|------|------|--------|-----|-------|
| | | | Adj | Lect | Instr | Asst | Asso | Prof | PT | Temp | Emp | Sep | Ret | Dec | Other |
| Brewer, Alex | Bach: Haskell Indian Nations Univ. Mast: University of Oklahoma PhD: Oregon State University | Environmental | | 2015 | | | | | - | Х | 2015 | 2016 | | | |
| 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 | | | | |
| Brown, Anthony | Bach: Central Washington University Mast: Central Washington University PhD: | Chemistry Instructional and Classroom Technician 4 | | | 2007 | | | | Х | - | 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 | | - | - | 2006 | | | | |
| Rittenhouse, Robert | Bach: Atlantic Union College Mast: PhD: Worcester Polytechnic Inst. | Physical Senior Lecturer - 2013 | | 2007 | | | | | - | Х | 2007 | | | | |
| Belofsky, Gil | Bach: Carnegie Mellon University Mast: Colorado State University PhD: The University of Iowa | Organic Natural Products | | | | 2008 | 2014 | | - | - | 2008 | | | | |

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| Name | Training | Specialization | | | Ra | ank | | | | ime or mp | | Status | | | |
|---------------------|---|-----------------------------------|------|------|-------|------|------|------|----|--------------|------|--------|-----|-----|-------|
| | | | Adj | Lect | Instr | Asst | Asso | Prof | PT | Temp | Emp | Sep | Ret | Dec | Other |
| 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 | | - | 1 | 2009 | | | | |
| Swain, Paul Whitney | Bach: Indiana University Mast: PhD: University of Montana | Biochemistry Organic | | 2013 | | | | | - | Х | 2013 | | | | |
| Beng, Timothy | Bach: University of Buea Mast: East Tennessee State Univ. PhD: University of Arkansas | Organic | | | | 2015 | | | - | - | 2015 | | | | |
| Gillman, Cody | Bach: Central Washington University Mast: IP- Central Washington Univ PhD: | Biochemistry * Graduate Assistant | 2015 | | | | | | Х | - | 2015 | | | | |
| Long, Michael Scott | Bach: New Mexico Highlands Univ Mast: PhD: Pennsylvania State University | Analytical | | 2015 | | | | | - | Х | 2015 | | | | |
| Ricketson, Derek | Bach: Mississippi State University Mast: PhD: University of Oregon | Biochemistry | | 2015 | | | | | - | Х | 2015 | | | | |

ACS Committee on Professional Training

2016 International Experience Survey

The results of this survey will be compiled and used by CPT to inform their discussion of international experiences for undergraduates. CPT also plans to publish the aggregated data in their newsletter. None of the data will be released in association with the names of the colleges or universities responding to the survey.

| College/University Name: | Central Washington University |
|--------------------------------|--|
| | |
| 1) Do your undergraduate ch | nemistry majors have the opportunity to participate in international experiences as part of undergraduate education? |
| Yes No | |
| | |
| 2) If so, can undergraduate of | chemistry majors study abroad during the academic year without lengthening their tenure as undergraduates? |
| ✓ Yes | |
| No No | |
| N/A | |
| 3) Does your department pro | omote international opportunities (internships, collaborations, etc.) for undergraduate chemistry majors? |
| ✓ Yes | |
| No No | |
| Not Available | |
| 4) What percentage of your | undergraduate chemistry majors are international students? |
| Less than 1% | |
| 1%-5% | |
| 6%-10% | |
| 11%-25% | |
| More than 25% | |
| 5) Are your chemistry majors | s required to take foreign language instruction? |
| Yes, exposure t | o foreign language is required |
| Foreign langua | ge instruction is available but not required |
| Foreign languag | ge instruction is not available at our institution |