

## Chemistry Department Action Plan, 2015-2016 APR

From its 2015-2016 Academic Program Review, the Chemistry Department has targeted six main areas for improvement: Personnel, Research, Assessment, Curriculum, Professional Development, and Program Visibility. The Department developed detailed steps needed to achieve these improvements. The Department evaluated these steps using three criteria (Urgency, Importance, and Required Faculty Time to Accomplish) to develop a final plan. A summary of the plan is given below, with a more detailed version following. The department will form separate committees to coordinate the activities in each of the six areas, beginning work in Fall 2016. All members of the department are involved in each of these areas.

| Area                            | Action Step  | Responsible Party  | Complete             | JCU Strategic Goal      |
|---------------------------------|--|--|----------------------|-------------------------|
| <b>Personnel</b>                | Hire a new Faculty member and a new staff member   | Chair, Search Committee, Dean, and Provost   | Fall 2018            | Goal 1-3                |
| <b>Research</b>                 | Develop a vibrant research program in Chemistry that supports students and faculty   | Research Committee, Chair and Department   | Spring 2020, Ongoing | Goals 1-3 and 1-4       |
| <b>Assessment</b>               | Utilize best practices for data collection and decision making related to course- and program-level improvements for student learning  | Assessment Committee, Assessment Coordinator, Chair, Faculty and Instructors   | Spring 2019, Ongoing | Goal 3-3                |
| <b>Curriculum</b>               | Develop and staff a modern and flexible curriculum that continues to meet American Chemical Society's Committee on Professional Training guidelines, supports the JCU's Integrative Core and Honor's program | Curriculum Committee, Chair, Science Chairs, Administrative Assistant, STEM Associate Dean, ENW Director, Honors Program Director, Department and data@jcu.edu | Fall 2018, Ongoing   | Goals 1-1,1-2, and 3-3  |
| <b>Professional Development</b> | Develop support system for faculty professional development and curricular and co-curricular activities to support student's non-technical development   | Professional Development Committee, Dean, and Provost and Department   | Spring 2010          | Goals 1-3 and 1-5       |
| <b>Program Visibility</b>       | Develop an improved method to publicize the good work done by the department, thereby improving the Department and increasing the number of Chemistry majors graduated                                       | Program Visibility Committee, Chair, Administrative Assistant, Admissions/Enrollment Division, Marketing Division  | Spring 2017, Ongoing | Goals 1-2, 1-5, and 3-4 |

## Chemistry Department Action Plan, 2015-2016 APR

### Actions Steps that Require New Financial Resources

| Area      | Action Step  | Responsible Party                | Start     | Complete    | JCU Strategic Goal |
|-----------|--|----------------------------------|-----------|-------------|--------------------|
| Personnel | Hire new Tenure Track Faculty                                    | Chair, Department, Dean, Provost | Fall 2016 | Spring 2017 | Goal 1-3           |
| Personnel | Hire New Staff member for lab instruction and/or instrumentation | Chair, Department, Dean, Provost | Fall 2018 | Fall 2018   | Goal 1-3           |

### Actions Steps that do not Require New Financial Resources

| Area     | Action Step   | Responsible Party         | Start     | Complete    | JCU Strategic Goal |
|----------|---|---------------------------|-----------|-------------|--------------------|
| Research | Investigate best practices, opportunities, challenges and available resources to improve the undergraduate's experience in our research program.                                      | Research Committee        | Fall 2016 | Spring 2017 | Goals 1-3 & 1-4    |
| Research | Investigate and determine departmental approaches toward balancing student's needs with faculty needs for productivity and advancement, including independent vs. collaborative work. | Chair, Research Committee | Fall 2016 | Spring 2018 | Goals 1-3 & 1-4    |
| Research | Use results from above action steps, discuss and decide on action steps to work toward a vibrant research program in Chemistry.   | Department                | Fall 2018 | Ongoing     | Goals 1-3 & 1-4    |

## Chemistry Department Action Plan, 2015-2016 APR

| Area   | Action Step  | Responsible Party   | Start       | Complete            | JCU Strategic Goal |
|--|--|---|-------------|---------------------|--------------------|
| <b>Course-level Assessment:</b>  | Each instructor will review and improve practices in assessing course-level SLO's using direct and indirect measures.  | All Faculty & Instructors   | Fall 2016   | Ongoing             | Goal 3-3           |
| <b>Program-level Assessment: Direct Measures</b>                           | Instructors in courses that are capture points of program SLO's will reflect upon the effectiveness of the assignments used to assess those SLO's and make any appropriate changes. The procedure to collect program level assessment data will be finalized and approved. Instructors will submit program level assessment data and collect relevant student work using Canvas. | Faculty & Instructors teaching courses that are capture points for Dept. Assessment | Fall 2016   | Ongoing             | Goal 3-3           |
| <b>Program-level Assessment: Revised Dimensions &amp; Rubrics</b>          | Dimensions for each program SLO will be revised to reflect the most essential skills and concepts expected of chemistry graduates. Rubrics based upon these revised dimensions, will be developed that allow the program to track students' progress as they move through the program.   | All Faculty & Instructors   | Fall 2018   | Spring 2019         | Goal 3-3           |
| <b>Program-level Assessment: Indirect Measures (Senior Exit Interview)</b> | The senior exit interview will be used as an indirect measure for program level assessment. An electronic survey, asking students to assess their achievement of SLO's will be administered using Qualtrics. The Department Chair will conduct oral interviews and provide a summary report of themes related to the program to the department.                                  | Assessment Coordinator, Chair, & All Faculty  | Spring 2016 | Ongoing each Spring | Goal 3-3           |

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| Area   | Action Step  | Responsible Party  | Start       | Complete  | JCU Strategic Goal |
|--|--|--|-------------|-----------|--------------------|
| <b>Curriculum:<br/>ACS CPT</b>               | Re-establish a curriculum committee with charge to guide the department in continuing to meet American Chemical Society's Committee on Professional Training (CPT) requirements by placing CPT-related items on Dept meeting agenda and maintaining records of curricular decisions. | Department, Chair & Administrative Assistant                   | Spring 2016 | Ongoing   | Goals 1-2 and 3-3  |
| <b>Curriculum:<br/>ACS CPT</b>               | Discuss new CPT guidelines regarding literature use and inclusion of macromolecules in courses other than biochemistry   | Department   | Fall 2018   | Fall 2018 | Goals 1-2 and 3-3  |
| <b>Curriculum:<br/>ICC</b>                   | Define capstone experiences based on guidelines approved by the Core Committee   | Core Director & Department                                     | Spring 2017 | Fall 2017 | Goal 1-1           |
| <b>Curriculum:<br/>ICC</b>                   | Develop and implement plan for staffing and course offerings in ICC based on data about courses needed   | Science Chairs & ENW Director, STEM Associate Dean, Department | Spring 2017 | Ongoing   | Goal 1-1           |
| <b>Curriculum:<br/>Flexible &amp; Modern</b> | Collect data on courses taken by JCU students and share data that has already been collected to determine whether curricular changes should be made regarding math requirements, physical chemistry offerings, or upper level BL and CH electives.                                   | Curriculum Committee, Chair & data@jcu.edu, Department         | Fall 2016   | Fall 2016 | Goal 1-2           |
| <b>Curriculum:<br/>Flexible &amp; Modern</b> | Finalize Honors Pathway suggestions for Honors Students in Chemistry   | Honors Program Director & Department                           | Spring 2017 | Fall 2017 | Goal 1-2           |

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|---|---|--|-------------|-------------|--------------------|
| <b>Curriculum:<br/>Flexible &amp;<br/>Modern</b>                    | Discuss scheduling of Biochem/other easily(?) handled scheduling concerns   | Department   | Fall 2016   | Fall 2016   | Goal 1-2           |
| <b>Curriculum:<br/>Flexible &amp;<br/>Modern &amp;<br/>Rigorous</b> | Develop and implement a new flexible, rigorous, and modern curriculum by collecting information on best practices, determining how those best practices apply to JCU Chemistry and how they fit with data collected from program assessment of SLOs and as well as data collected above.  | Curriculum Committee, Chair, Assessment Coordinator, & All Faculty | Spring 2018 | Ongoing     | Goal 1-2           |
| <b>Professional Development:<br/>Faculty</b>                        | Conduct survey of needs and desires by faculty/ staff in area of professional development (highlighting Research {Connects with Research Program and Program Visibility}, Teaching, Planning, Student development-including recommendation writing, Workload balance, Stress relief, Administration, Career Development) and develop plans to attain desired state. | Professional Development Committee & Department                    | Spring 2016 | Fall 2017   | Goals 1-3 and 3-3  |
| <b>Professional Development:<br/>Faculty</b>                        | Revise Promotion to Professor document so that it is approved by Dean and Provost   | Department, Dean, Provost  | Fall 2016   | Spring 2017 | Goal 1-3           |
| <b>Professional Development:<br/>Students</b>                       | Survey current students and recent graduates to find the things that we have done that were found useful and the things found missing in area of professional development   | Professional Development Committee                                 | Fall 2018   | Fall 2019   | Goal 1-5           |

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|--|--|--|-------------|---------------------|--------------------|
| <b>Professional Development: Students</b>  | Develop curricular and co-curricular activities to assure that desired professional development activities (oral competency, written competency, safety competency, literature competency, etc.) are occurring.  | Professional Development Committee & Department  | Fall 2019   | Spring 2020         | Goal 1-5           |
| <b>Visibility: Internal &amp; External</b> | Collect and analyze data on professional & graduate school placements and industrial positions (CH, BL, JCU); report of collected data (perhaps for 5-10 years) with display on website/bulletin board   | Chair or Program Visibility Committee (with support of faculty advisors & Administrative Assistant)        | Spring 2016 | Ongoing each Spring | Goal 1-5           |
| <b>Visibility: Internal &amp; External</b> | Capitalize on opportunities (e-mail, social media, etc.) to solicit & promote student, alumni and faculty achievements   | Chair (with support of faculty advisors & Administrative Assistant); or Program Visibility Committee       | Spring 2016 | Ongoing             | Goal 1-2           |
| <b>Visibility: Internal &amp; External</b> | Revised Web Site: Presence of a new page that has up to date information with pages geared toward particular audiences. (e.g. prospective students, current students...) with regular updates of news, events, recognitions, and awards  | Administrative Assistant   | Spring 2016 | Ongoing             | Goal 3-4           |
| <b>Visibility: Career Options</b>          | Better communication with Incoming/Prospective and Current Students (utilizing alumni in key positions); Measured by appearance of content on web site, participation of faculty in NSO and in admissions events held throughout the year, Networking of faculty and employers, mingling at career fairs, ACS events, etc. | All Faculty, Admissions/ Enrollment, Marketing, Chair (with support of faculty & Administrative Assistant) | Fall 2016   | Ongoing             | Goals 1-2 and 3-4  |

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|--|--|-------------------|-----------|----------|--------------------|
| <b>Visibility:<br/>Increase<br/>Majors</b> | Utilize Fr/SO Advising; New Student Orientation; General, Organic, and Analytical courses; Meet your Major; Open House; and Seminar to recruit majors- utilizing current students and alumni | Faculty & Alumni  | Fall 2016 | Ongoing  | Goal 1-2           |