UNIVERSITY OF SAN FRANCISCO | College of Arts and Sciences

ASSESSMENT REPORT REMOTE/DISTANCE LEARNING
ACADEMIC YEAR 2019 - 2020
REPORT DUE DATE: December 4, 2020

This is an alternative template.
Given the unusual circumstances of the 2019-2020 academic year, each program/department/major/minor/certificate has two options of assessment:
(a) Usual assessment report based on attached template OR
(b) Alternative assessment reflections on distance learning pivot based on this template
Every program/department/major/minor/certificate can choose ONE of the two report formats to submit

Please make sure to fill out Page 1 – Questions 1 and 2

- **Who should submit the report? – All majors, minors (including interdisciplinary minors), graduate and non-degree granting certificate programs of the College of Arts and Sciences.**
- **Programs can combine assessment reports for a major and a minor program into one aggregate report as long as the mission statements, program learning outcome(s) evaluated, methodology applied to each, and the results are clearly delineated in separate sections. If you choose to submit a remote learning reflections document, it should also have separate segments for major and minor**
- **Undergraduate, Graduate and Certificate Programs must submit separate reports. An aggregate report is allowed only for major and minor of the same program**
- **It is recommended that assessment report not exceed 10 pages. Additional materials (optional) can be added as appendices**
- **Curriculum Map should be submitted along with Assessment Report**

Some useful contacts:

1. Prof. Alexandra Amati, FDCD, Arts – adamati@usfca.edu
2. Prof. John Lendvay, FDCD, Sciences – lendvay@usfca.edu
3. Prof. Mark Meritt, FDCD, Humanities – meritt@usfca.edu
4. Prof. Michael Jonas, FDCD, Social Sciences – mrjonas@usfca.edu
5. Prof. Suparna Chakraborty, AD Academic Effectiveness – schakraborty2@usfca.edu

Academic Effectiveness Annual Assessment Resource Page:

https://myusf.usfca.edu/arts-sciences/faculty-resources/academic-effectiveness/assessment

Email to submit the report: assessment_cas@usfca.edu

Important: Please write the name of your program or department in the subject line.

For example: FineArts_Major (if you decide to submit a separate report for major and minor); FineArts_Aggregate (when submitting an aggregate report)

I. LOGISTICS

1. **Please indicate the name and email of the program contact person to whom feedback should be sent (usually Chair, Program Director, or Faculty Assessment Coordinator).**

   Ryan M. West – Program Director, Assistant Professor of Chemistry

   Email: Rmwest2@usfca.edu

2. **Please indicate if you are submitting report for (a) a Major, (b) a Minor, (c) an aggregate report for a Major and Minor (in which case, each should be explained in a separate paragraph as in this template), (d) a Graduate or (e) a Certificate Program.**
   Please also indicate which report format are you submitting –Standard Report or Reflections Document

   (d) Graduate program – Reflections document

3. Have there been any revisions to the Curricular Map in 2019-2020 academic year? If there has been a change, please submit the new/revised Curricular Map document.

No.

II. MISSION STATEMENT & PROGRAM LEARNING OUTCOMES

1. **Were any changes made to the program mission statement since the last assessment cycle in October 2019? Kindly state "Yes" or "No." Please provide the current mission statement below. If you are submitting an aggregate report, please provide the current mission statements of both the major and the minor program**

Mission Statement (Major/Graduate/Certificate):

No.

Mission Statement: To deliver a broad-based, challenging research experience that will train students to participate effectively as PhD researchers, health professionals, government and industry professionals, or as teachers. The program will foster a culture that: values strong researcher-faculty-staff interactions and strives to help researchers become self-learners and to discover the excitement and creativity of chemical research. We strive to instill values of social responsibility with ethical behavior as part of a chemical research community culminating in the writing of a research thesis.

3. **Were any changes made to the program learning outcomes (PLOs) since the last assessment cycle in October 2019? Kindly state "Yes" or "No." Please provide the current PLOs below. If you are submitting an aggregate report, please provide the current PLOs for both the major and the minor programs.**

Note: Major revisions in the program learning outcomes need to go through the College Curriculum Committee (contact: Professor Joshua Gamson, gamson@usfca.edu). Minor editorial changes are not required to go through the College Curriculum Committee.

PLOs (Major/Graduate/Certificate):

No.

1. demonstrate broad knowledge in areas of chemistry relevant to research interests
2. become safe and proficient in laboratory practice and instrumental techniques necessary for research
3. communicate the subject of chemistry in written and oral forms including: correspondence, reports and short presentations that may utilize multimedia tools
4. develop critical thinking skills with the ability to judge scientific arguments and make arguments based on experiments conducted during research project
5. prepared to pursue further graduate studies or employment in chemistry or related scientific fields

III. REMOTE/DISTANCE LEARNING

1. **What elements of the program were adaptable to a remote/distance learning environment?**

While out of the labs, our students were still able to continue meeting for their CHEM 698 course in the Spring. This course met via Zoom, and through this course, the students were able to partially work on

PLOs 1, 3, 4, and 5 (particularly PLO 3). Students also continued to meet on a regular basis (via Zoom) with their faculty research advisors to discuss (previous) results, analyze research in the field (discussion of the literature), and prepare presentations. Some students were still able to present their work at scientific meetings remotely.

2. **What elements of the program were not adaptable to a remote/distance learning environment?**

Given the research-based nature of our chemistry MS program (as opposed to a coursework-based MS), very little of our program's research apsect was/is adaptable to a remote/distance learning environment. In order to satisfy the PLOs, particularly outcome #2, the students must be in the laboratories to carry-out experiments – this was not possible. While students can, in principle, work on PLOs 1, 2, 4, and 5 outside of the lab, up to a point (see previous question), these all require the data and experimental outcomes that can only come from the laboratory work. Due to COVID-19 and the campus closure, our MS students lost valuable time in the laboratories during the Spring and Summer and 2020. This lost time will adversely affect their ability to complete their MS thesis on time.

3. **What was the average proportion of synchronous versus asynchronous learning for your program or parts thereof? A rough estimate would suffice.**

100%. All CHEM 698 meetings and meetings with faculty research advisors were synchronous.

4. **For what aspects of learning is synchronous instruction effective and for which ones is asynchronous instruction more effective?**

Synchronous learning can and was useful for discussion the research field and literature, and discussing and learning state-of-the art concepts and theories, and preparation of written and oral reports. Asynchronous learning in our program is ineffective overall: the experimental work requires hands-on training in the laboratories; the preparation of written and oral reports require direct feed-back and discussion with the faculty advisor. Our program is hands-on and built upon one-on-one training and teaching.

5. **As remote/distance learning continues in the current environment, what changes has the program instituted based on experiences with remote instruction?**

The Dean's office and USF have worked with the Chemistry MS program (and the similar Biology MS program), along with the SFPHD, to develop a plan for our students to continue working in the labs. The health and safety protocols developed allow our students to continue working in the labs. This arrangement has alleviated the issues encountered in the Spring and Summer of 2020.