Chemical and Biological Science
COVID-19 Continuity of Instruction Plan
Updated and submitted 3/17/2020

1. Chemical and Biological Sciences is well positioned to transition to remote instruction since nearly half of our courses are already online. The majority of our courses have associated laboratories designed to establish a foundation of content knowledge and to practice the skills necessary to do scientific research. Creative methods of delivery are being developed for laboratory courses and are discussed below. Completion of lecture content is nearly complete with the most frequent method of delivery being that of Blackboard. Most faculty had previously been trained to deliver content in Blackboard. Many faculty opted to take refresher workshops offered through Elite or arranged through CBS faculty leaders in the delivery of online content.

2. We have many chemistry, biology, and biotechnology faculty members who are expert at online course delivery and who have agreed to be leads for the transition to remote instruction:

Course	Faculty Leads	Email
BIOL 105	**Tori Schneider**	victoria.schneider@montgomerycollege.edu
BIOL 106	**Tori Schneider**	victoria.schneider@montgomerycollege.edu
BIOL 130	**Janet Norcross**	janet.norcross@montgomerycollege.edu
BIOL 131	**Alex Micich**	alex.micich@montgomerycollege.edu
BIOL 150	**Antonio Del Castillo-Olivares**	antonio.delcastillo-olivares@montgomerycollege.edu
BIOL 202	**Steve Tsang**	hsinyi.tsang@montgomerycollege.edu
BIOL 212/L	**Leah Allen**	leah.allen@montgomerycollege.edu
BIOL 213/L	**Leah Allen**	leah.allen@montgomerycollege.edu
BIOL 226	**Jeff Chyatte**	jeff.chyatte@montgomerycollege.edu
BIOL 228	**Alex Micich**	alex.micich@ montgomerycollege.edu
CHEM 099	**Fotis Nifiatis**	fotis.nifiatis@montgomerycollege.edu
	Thomas Chen	thomas.chen@montgomerycollege.edu
CHEM 109	**Craig Benson**	craig.benson@montgomerycollege.edu
CHEM 131	**Fotis Nifiatis**	fotis.nifiatis@montgomerycollege.edu
BIOT – All courses	**Lori Kelman**	lori.kelman@montgomerycollege.edu

In addition, for each of our courses, there is a standing workgroup of faculty who act as a resource for that course. In most of these course workgroups there is at least one member who has extensive experience with remote instruction. There is also at least one member on each campus. We will prioritize communication to faculty to ensure that everyone knows who to contact for content related questions relevant to the transitioning of their course(s). Several leads have already been proactive in reaching out to all faculty teaching a section of their assigned course.

Most of our courses already have Bb communities and in some instances these communities make online resources available to community members. Our faculty will work to expand these already existing

collections of resources so that there is more that is relevant to remote instruction. We will also make sure instructors know about these resources and how they can gain access. Faculty were informed of the Elite remote teaching resource website (https://www.montgomerycollege.edu/offices/elite/emergency-remote-teaching-guidelines.html). Faculty requiring remote teaching instructional materials, e.g. laptops, headsets, webcam, or stylus have had the opportunity to pick up resources (or be reimbursed for purchases up to $100). Faculty creatively discussed mechanisms to develop and offer appropriate laboratory instruction during this period of remote teaching. This included:

- The production of a short video of a lab common to all course sections being carried out by a faculty member. The video will be distributed to all course faculty.
- The creation of pre-generated class data sets for morphological unknowns and chemical unknowns to be provided to students. This would ensure that quantitative instruction will continue.
- Potentially change the timing of labs (frontload lecture content now and concentrate on laboratory content later). This only works in the short term and for limited courses owing to facility space.
- Modifying labs to maximize content knowledge and minimize skill practice was suggested for non-major general education courses.

3. Potential Barriers/Issues:

- Maintaining quality of the laboratory experience is an issue. In most instances, the use of equipment and the need to practice skills cannot be replicated by current technology. The exceptions are BIOL 131 Human Body and 212/213 Anatomy & Physiology I & II developed by Drs. Alex Micich and Leah Allen, respectively.
- Part-time faculty may not have the same level of access to resources that can aid them in adjusting their course delivery. As many of these faculty have full-time jobs in addition to their work at MC, they will also not have the same amount of time available to them. It is important to note that resources (Blackboard community sites, websites, online course materials including OER resources) have been shared already with part-time faculty.
- Ensuring that faculty appropriately adjust their syllabi to reflect necessary course modifications may prove to be a challenge.
- Test security remains a faculty concern. If we cannot require students to come to campus, then how can we ensure that the student is doing his or her own exam? Using ProctorU has been suggested but not all students have the technology at home to use this option and faculty were largely unaware that this option exists.
- Accessibility and ensuring that students have their DSS accommodations needs met is an issue.

CBS Workgroups
Remote Teaching
Workgroups

Workgroups have been established from the list of campus course coordinators. Coordinators oversee course offerings including the tasks below. Additionally, for each department, an online lead has been identified by the department chair. Although multiple faculty may teach online, the thought was to have a designated "buddy" to turn to if faculty encountered an online concern or problem. The online "buddy" by department are: CBS Germantown – **Kiersten Newtoff**, Rockville Chemistry- **Craig Benson**, Rockville Biology – **Victoria Schneider**, CBS TPSS – **Alex Micich**. They will be in contact with each other to discuss and document issues that may arise.

Workgroup Tasks for the Rest of the Semester:

1. Create Communication Strategy
    a. Determine how to communicate with the rest of the workgroup
    b. Create a communication strategy for:
        i. All course instructors (including online) particularly during this time of remote teaching and for the remainder of the semester.
        ii. To inform course faculty of answers to posed questions
2. Create and Maintain Common Course Outline to include:
    a. Required Textbook
    b. Required Technology
    c. Common Final & Review (if applicable)
    d. General Education course signature assignments
    e. Course Topics
3. Identify a clear student success strategy to ensure student engagement and success
4. Develop and suggest language for faculty to incorporate into their syllabi that addresses modifications that may have resulted with the move to remote teaching.
5. Recommend a plan to assess students during this period of remote teaching
6. Ensure that General Education course assessment and signature assignments are completed
7. Work with Learning Centers on each campus to keep them informed of changes
8. Work with the library to keep course pages updated

Course	TPSS Lead	RV Lead	GT Lead	Additional Members
BIOL 101	Alessandra Sagasti	Vedham Karpakakunjaram	James Smith	
BIOL 105	Sean Cooney	Tori Schneider	Kiersten Newtoff	
BIOL 106	Sean Cooney	Tori Schneider	Kiersten Newtoff	
BIOL 111		Esat Attikan		
BIOL 114		Shawn Lester		
BIOL 130	Alex Micich	Janet Norcross	Abdulai Barrie	
BIOL 131	Alex Micich		Abdulai Barrie	

BIOL 150	Sean Cooney	Evdokia Kastanos	Padma Tangirala	Antonio Del Castillo-Olivares
BIOL 151	Alessandra Sagasti	Gina Wesley	Kiersten Newtoff	
BIOL 202			Steve Tsang	
BIOL 210	Ijeoma Otigbuo	Michael Chase	Meg Birney	
BIOL 212	Nelson Bennett	Sara Kalifa	Janice Gallagher	Leah Allen
BIOL 213	Carole Wolin	Leah Allen	Satish Gupta	
BIOL 222	Linda Jurata	Michael Chase	Scot Magnotta	
BIOL 226	Jeff Chyatte		Jennifer Capparella	
BIOL 228	Alex Micich		Abdulai Barrie	
BIOL 230		Ishrat Rahman		
CHEM 099	Fotis Nifiatis	Thomas Chen	Don Newlin	
CHEM 109		Craig Benson		Nevart Tahmazian
CHEM 109L		Craig Benson		
CHEM 131	Aksana Chabatar	Craig Benson	Don Newlin	Fotis Nifiatis
CHEM 132	Aksana Chabatar	Patricia Takahara	Don Newlin	
CHEM 135		Abner Mintz		
CHEM 150	Solomon Teklai			
CHEM 203	Cory Newman	Rachel Ndonye	Don Newlin	
CHEM 204	Adel Halli	Sripriya Seetharaman	Don Newlin	
CHEM 272		Thomas Chen		
BIOT - All			Lori Kelman	

CBS is prepared to move forward with online or other forms of remote instruction beginning the 23rd of March. Faculty collegiality is high and all are motivated to make remote instruction meaningful to our students.