Dear [First Name],

Welcome to organic chemistry at Michigan State University!

Before you start CEM 252 we would like to get an idea about your understanding of chemical reactions. You will also be receiving an email asking for your permission to use your anonymous responses for a research study to characterize and improve the course here at MSU. Whether or not you decide to participate by allowing us to use your responses, you can complete this activity for class credit.

Your responses will express your viewpoints and opinions so there is no right or wrong way to answer these questions. This activity should take you about 20 minutes to complete. We ask you to complete this activity yourself and take it seriously as it will count as a completion grade towards your CEM 252 course. Below you will find the directions for your CEM 252 activity, which is due this Sunday, September 13th at 5:00 pm.

Please read all of the following directions BEFORE attempting the activity.

1. You have until 5:00 pm on Sunday, September 13th to complete the activity.

2. You will be asked to enter your email address - Use your MSU email address (NetID@msu.edu).

3. You will be asked to enter a password. Your password is chemistry (do NOT use your MSU password). If you have used beSocratic before, please use your previous password. If you have forgotten your password, click 'I forgot my password' on the login screen and follow the instructions.

4. Please read each question carefully and answer them to the best of your ability. Please do not use any outside resources for this activity.

5. Please complete the activity there – and click finish at the end.

6. If you borrow someone else’s computer, confirm that you are logged into your MSU email address.

7. You can access the activity by click on this link: http://besocratic.chemistry.msu.edu/besocratic.html?Activity=2533#/ActivityViewerPage

Please email surveys@chemistry.msu.edu, if you have any issues. Please allow 24 hours for a response to your email. Please include your full name, and the course number (CEM 252). Do NOT email your TA or your instructor.

Thank you,
Hovig Kouyoumdjian
Michigan State University

Note 1: MAC USERS PLEASE USE SAFARI or FIREFOX as the browser (DO NOT USE CHROME). You will need to install Silverlight. The system will prompt you how to install Silverlight.

Note 2: WINDOWS USERS PLEASE USE INTERNET EXPLORER or FIREFOX as the browser (DO NOT USE CHROME). You will need to install Silverlight. The system will prompt you how to install Silverlight.

Note 3: If you are using WINDOWS 10 PLEASE USE FIREFOX ONLY as the browser. You will need to install Silverlight. The system will prompt you how to install Silverlight.
Dear [First Name],

You have received this email because of your current enrollment in an organic chemistry course at Michigan State University.

We are conducting research related to the ways in which the instructional approaches in science courses impact student understanding. During the semester you will be asked to complete a few activities for your course. These activities are considered as participation credit for part of your grade and must be completed to receive credit. However, you do have the option of whether these activities are used for research purposes. We hope to use findings from our research in order to improve how courses are taught at Michigan State University and to improve experiences in chemistry courses for students like yourself.

We request your permission to examine this data for our research, please read the consent form below. Your participation would be completely voluntary, anonymous, and confidential and will have no bearing on your course grade or any other course at Michigan State University. **If you choose to participate then no further action is required.** Please note that if you consent to this research, there is no additional work assigned outside of what is required for your course; we only wish to examine assessments that you need to complete as a part of the course. However, you must be 18 or older to participate in this research project. If you are under the age of 18, please contact us at surveys@chemistry.msu.edu to withdraw yourself.

If you would like to opt out of participation in this research, please respond to this email for your course materials to be removed from our dataset.

Sincerely,
Hovig Kouyoumdjian

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**Research Participant Information and Consent Form**

You are being asked to participate in a research study. Researchers are required to provide a consent form to inform you about the study, to convey that participation is voluntary, to explain risks and benefits of participation, and to enable you to make an informed decision. Please feel free to ask the researchers any questions you may have about the study or about your role as a participant.
1. PURPOSE OF RESEARCH
   - You are being asked to participate in a research study that examines the effectiveness of introductory curricula at Michigan State University
   - This research is being conducted by the physics, chemistry, and biology departments at Michigan State University
   - You have been selected as a possible participant in this study because you are currently enrolled in one or more introductory science courses at Michigan State University
   - From this study, the researchers hope to gain understanding about how the current curricula impacts students' understanding. This research will be used to inform the design of instructional materials for science courses and the design of subsequent assessments for students' conceptual understanding

2. WHAT YOU WILL DO
   - In this study, we will examine the impacts of chemistry, biology, and physics curricula at Michigan State University
   - If you consent to participate in this study, you may be asked to discuss your understanding of concepts or your personal attitudes or beliefs about one of these courses
   - In order to examine how the curricula impact different groups of students, we will collect demographic information from the registrar's office for students enrolled in these courses at Michigan State University. These data will include information such as GPA, SAT or ACT score, major, sex, ethnicity, number of credits, etc. We will also collect data from the registrar's office concerning students' course grades at the completion of these science courses
   - Assessments related to student understanding will be
administered either as part of the lecture course, recitation sections, or email solicitation.

- Assessments may be administered online using a web-based interface or on paper.
- Research findings will be available upon request.

3. PRIVACY AND CONFIDENTIALITY:
- The data for this project will be collected and handled confidentially.
- Any physical data collected (such as written work) will be stored in locked cabinets within the Principle Investigators’ research space and electronic data will be stored on password-protected computers.
- Only the primary investigator and project colleagues will have access to the data; data will be kept at least 5 years, and the IRB may also have access to the research data in the event of an audit.
- The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain anonymous.
- Anonymous records of student work may be used in presentations or publications.

4. COSTS AND COMPENSATION FOR BEING IN THE STUDY:
- There are no direct costs or benefits associated with participation in this study. However, your participation may contribute to the understanding and advancement of knowledge related to improving undergraduate education here at Michigan State University and elsewhere.

5. Contact Information for Questions and Concerns:
- If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury, please contact the researcher, Melanie Cooper, Department of Chemistry, 578 South Shaw Lane, East Lansing, MI. 48824; mmc@msu.edu, (517) 355-9715, ext. 197.
- If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University’s Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 207 Olds Hall, MSU, East Lansing, MI 48824.
6. **Your rights to participate, say no, or withdraw:**
   - Participation in this research project is completely voluntary. You have the right to say no or to change your mind at any time and withdraw. You may choose to withdraw your participation.
   - You must be 18 or older to participate in this research project. If you are under the age of 18, please contact us at surveys@chemistry.msu.edu to withdraw yourself.
   - Whether you choose to participate or not will have no bearing on your grade or evaluation on any course at MSU

7. **Documentation of Informed consent**
   If you consent to participate in this study, no further action is required.

   If you wish to be excluded from this study, please contact Hovig Kouyoumdjian at Michigan State University (surveys@chemistry.msu.edu)