

Application Details

Manage Application: Textbook Transformation Grants Round Seven

Award Cycle: Round 7

Internal Submission Deadline: Sunday, September 4, 2016

Application Title: 259

Application ID: #001169

Submitter First Name: Andrea

Submitter Last Name: Wallace

Submitter Title: Assistant Vice President for Academic Affairs
/ Professor of Chemistry

Submitter Email Address: awallace@ccga.edu

Submitter Phone Number: 912-279-5931

Submitter Campus Role: Provost / Academic Affairs Office

Applicant First Name: Colleen

Applicant Last Name: Knight

Applicant Email Address: cknight@ccga.edu

Applicant Phone Number: 912-279-5937

Primary Appointment Title: Assistant Professor of Chemistry / Chair,
Department of Natural Sciences

Institution Name(s): College of Coastal Georgia

Proposal Category: No-or-Low-Cost-to-Students Learning
Materials

Submission Date: Tuesday, September 6, 2016

Team Members (Name, Title, Department, Institutions if different, and email address for each):

Colleen Knight, Assistant Professor of Chemistry, cknight@ccga.edu

Leon Gardner, Associate Professor of Chemistry, lgardner@ccga.edu

Joseph Lodmell, Lecturer of Chemistry, jlodmell@ccga.edu

Ernest Pascoe, Part-time Instructor of Chemistry, espascoe@ccga.edu

Andrea Wallace, Professor of Chemistry, awallace@ccga.edu

Lisa McNeal, Director of e-Learning, lmcneal@ccga.edu

Sponsor, (Name, Title, Department, Institution):

Dr. Tracy Pellett, Vice President for Academic Affairs, College of Coastal Georgia

Final Semester of Instruction: Fall 2017

Proposal Title: 259

Course Names, Course Numbers and Semesters Offered:

CHEM 1211, Principles of Chemistry I, Fall/Spring/Summer

CHEM 1212, Principles of Chemistry II, Fall/Spring/Summer

CHEM 2211, Organic Chemistry I, Fall/Spring

CHEM 2212, Organic Chemistry II, Fall/Spring

Average Number of Students per Course Section: 24

Number of Course Sections Affected by Implementation in Academic Year: 24

Total Number of Students Affected by Implementation in Academic Year: 576

List the original course materials for students (including title, whether optional or required, & cost for each item): CHEM 1211/1212 Principles of Chemistry I and II – Chemistry: An Atoms-Focused Approach by Natalie Foster, Thomas Gilbert, and Rein Kirss with Ebook and SmartWork Registration card - \$156.25 – Required
CHEM 2211/2212 Organic Chemistry I and II – Organic Chemistry, 9th ed. by John McMurry with OWL v2 24 month printed access card - \$386.95 - Required

Requested Amount of Funding: \$29,900

Original per Student Cost: CHEM 1211/1212 - \$156.25, CHEM 2211/2212 - \$386.95

Post-Proposal Projected Student Cost: CHEM 1211/1212 - \$60 (includes online homework access) per student over a two semester period, CHEM 2211/2212 - \$65 (includes online homework access) per student over a two semester period

Projected Per Student Savings: CHEM 1211/1212 - \$96.25 per student, CHEM 2211/2212 - \$321.95 per students

Projected Total Annual Student Savings: CHEM 1211/1212 - $\$96.25 \times 432 = \$41,580$, CHEM 2211/2212 - $\$321.95 \times 144 = \$46,360.80$, Total = $\$87,940.80$ per academic year

Creation and Hosting Platforms (Use "n/a" if none):

Top Hat software and ebook, and D2L

Project Goals:

The main goals of this project are to provide an accessible, low-cost option for our students while providing a quality product that will enhance student success in the Principles of Chemistry and Organic Chemistry sequences for our Science majors. Please note that the use of Top Hat is a low-cost option as opposed to a no-cost option. However, Top Hat provides a number of advantages. 1) Top Hat provides an e-text that is available through a variety of platforms including an app on an ipad/iphone/Android. Instructors have complete freedom to add or remove text. The changes become available to the students immediately through the app. 2) Questions are embedded in the reading. Instructors may add additional questions as desired. To encourage preparation for class, students may be assigned these questions within the text and may be graded based on participation and/or correctness at the instructor's discretion. 3) PowerPoints in which questions can be embedded and answered by students in real time with analysis collected by the instructor are incorporated into the presentation software. 4) Instructors may annotate the PowerPoint presentation during class using an ipad/Android device. These are preserved for later student review. Students' annotations of the presentation on their device are also preserved for later review. 5) Online homework is included in the cost (\$60 for CHEM 1211/1212, used for two semesters, and available for life / \$65 for CHEM 2211/2212, used for two semesters, and available for life). If the OpenStax text were utilized for the Principles of Chemistry courses, WebAssign online homework would still need to be purchased by the students at a cost of \$33.95 per semester or \$51.90 for a multi-term subscription per textbook. 6) There is no OpenStax option for Organic Chemistry. Utilizing Top Hat throughout the four semester progression of chemistry classes will provide continuity and enhance learning since students will not have to learn a new system each time they begin a new chemistry course. 7) Top Hat texts remain available to the students for life and they may access the version of the textbook they used or the most current textbook. The text can be printed if the students prefer this option.

In conclusion, students will be provided not only a low-cost option for CHEM

1211/1212/2211/2212, but they will also have a much improved, customized product that can be easily accessed through any mobile device.

Statement of Transformation:

At the College of Coastal Georgia, the Bachelors of Science in Biology is one of the most popular programs experiencing much growth over the years and currently having well over 300 majors enrolled in classes. All Biology majors are required to take the four semester sequence of Chemistry courses including CHEM 1211, 1212, 2211, and 2212. In addition, many of our Associate of Science majors, Bachelors of Science in Mathematics majors, etc. will take two or more of these chemistry courses. The texts that are currently in use for these courses are quite costly and what is found is that many of our students attempt to take the course without purchasing a textbook. Approximately 82% of CCGA students receive financial aid and simply cannot afford the high expense of Science textbooks thus limiting accessibility and lowering completion rates due to a lack of resources.

By the end of Spring 2018, Top Hat will be fully incorporated into the four semester sequence set of courses and have students experiencing a seamless transition from one course to the next since they will learn the system in CHEM 1211 and carry this knowledge through all four classes. They will be able to complete the sequence spending only \$125 for materials which previously would have cost approximately \$543 saving them over \$400 per student and allowing them to have experienced superior resources than those previously available. The transition to Top Hat will begin as a pilot project in each course beginning with CHEM 1211 in Fall 2016 and then complete implementation in all sections during the second semester the course is taught. During the second term teaching with Top Hat with a course, a full array of enhanced lecture/PowerPoint notes, a fully customized text, online exercises within the text, online homework, study guides, etc. as well as full integration of the grading system and other material into D2L will be accomplished.

Our ultimate goal is to provide students with excellent resources at low cost and promote student success. All team members which include a variety of professors/lecturer/part-time instructor/instructional design specialist are all at different stages in their careers and all provide a unique perspective to this project. All team members are fully engaged in this project and will work to provide a quality product that will lead to higher student success in Chemistry classes that are known for having high DFW rates.

Transformation Action Plan:

The entire team was involved in the identification, review, selection, and adoption of Top Hat. A representative from the company made a presentation to our group and we were all given access to materials to review on our own after the presentation. All members of the team fully support the concept of a low-cost text which provides more options from a teaching and learning standpoint.

Course syllabi for CHEM 1211, 1212, 2211, and 2212 will be aligned with the Top Hat customized texts that will be created by the team. A common set of learning objectives will be developed and utilized for each course. Course materials – lecture notes, customized texts, online exercises and homework, study guides, etc. will be placed on D2L and made available to all instructors. Our instructional designer will help us with connecting Top Hat to D2L.

Role of each team member:

Dr. Colleen Knight will serve as the coordinator for the entire project. Her responsibilities will include: 1) overseeing the entire project, 2) collecting and collating assessment data, 3) organizing regular meetings with the team to gather information, share materials, and analyze assessment results, and 4) submitting status and final reports.

Dr. Lisa McNeal will provide assistance with instructional design for the entire project. She will assist with online materials and seamless transition of information between the Top Hat app and D2L.

Each of the remaining Chemistry faculty will be assigned as a coordinator for a particular course. The coordinator will be responsible for formulating learning objectives for their assigned course based on input from all instructors, assembling all of the course materials and making them available to other full-time and part-time faculty that teach that particular course, and gathering assessment data for their assigned course and providing it to the primary principal investigator.

Dr. Leon Gardner will serve as the CHEM 1211 coordinator.

Capt. Joseph Lodmell will serve as the CHEM 1212 coordinator.

Dr. Ernest Pascoe will serve as the CHEM 2211 coordinator.

Dr. Andrea Wallace will serve as the CHEM 2212 coordinator.

All Chemistry faculty members who teach these courses will be expected to provide input including assessment data to the coordinators.

Top Hat access codes may be purchased through the CCGA bookstore or online. D2L access is available for all students registered in these courses.

Quantitative & Qualitative Measures: Both qualitative and quantitative measures will be employed to evaluate the effectiveness of Top Hat in CHEM 1211, 1212, 2211, and 2212. Surveys will include questions on student satisfaction with the quality, accessibility, and cost of materials. Students will also be asked to provide open-ended comments on their experience using Top Hat as their textbook, on-line homework, and presentation system in class. In addition, standard student evaluations of the course which are collected every semester will be reviewed and analyzed. The Chemistry unit currently utilizes American Chemical Society Standardized Exams in all of these courses. We will continue to give these exams and compare our scores before and after the introduction of Top Hat. In addition, we will assess DFW rates before and after the introduction of Top Hat. This set of data should provide an excellent quantitative analysis of the success of this project.

Timeline:

Fall 2016

Pilot Top Hat in four sections of CHEM 1211. Prepare class materials (syllabus, customized text, PowerPoint presentations / lecture notes, online exercises and homework, study guides, and exams).

Spring 2017

Fully implement Top Hat into all sections of CHEM 1211. Continually evaluate and improve all class materials.

Pilot Top Hat in at least two sections of CHEM 1212 and one section of 2211. Prepare class materials (syllabus, customized text, PowerPoint presentations / lecture notes, online exercises and homework, study guides, and exams).

Summer 2017

Fully implement Top Hat into all sections of CHEM 1211 and 1212. Continually evaluate and improve all class materials.

Fall 2017

Pilot Top Hat in one section of CHEM 2212. Prepare class materials (syllabus, customized

text, PowerPoint presentations / lecture notes, online exercises and homework, study guides, and exams)

Fully implement Top Hat into all sections of CHEM 1211, 1212, and 2211. Continually evaluate and improve all class materials.

Spring 2018

Full implementation of Top Hat into all sections of CHEM 1211, 1212, 2211, and 2212 is complete.

Status reports will be submitted at the end of Spring 2017 and Summer 2017. A final report will be submitted at the end of Fall 2017 after all courses have been taught using Top Hat at least once.

Budget:

Team members will receive salary supplements of \$4850 each for their contributions to this project. Dr. Knight and Dr. Wallace will receive an additional \$400 each to cover travel expenses to attend the mandatory kick-off meeting on October 17, 2016.

Team Member Salary Supplements

Dr. Colleen Knight - \$4850 (salary supplement) + \$400 (travel)

Dr. Andrea Wallace - \$4850 (salary supplement) + \$400 (travel)

Dr. Leon Gardner - \$4850 (salary supplement)

Capt. Joseph Lodmell – \$4850 (salary supplement)

Dr. Ernest Pascoe – \$4850 (salary supplement)

Dr. Lisa McNeal - \$4850 (salary supplement)

Total Request - \$29,900

This budget falls within the guidelines of the Large-Scale Transformation for multiple courses and department-wide adoptions with 500 or more students enrolled per academic year.

Sustainability Plan:

The plan is to develop and implement course materials associated with the Top Hat texts and platform for CHEM 1211, 1212, 2211, and 2212 within the time frame of Fall 2016 through Fall 2017. Full implementation with tested and refined course materials will be fully operational in

Spring 2018 for all four courses. Based on qualitative and quantitative evaluations that will be done each semester, improvements in course materials will be made as needed. The team will plan to meet at least once each semester to analyze, develop, and implement any new materials that are needed based on assessment data. The plan is to use Top Hat and associated materials indefinitely. After implementation is complete, there should be no additional costs only immense savings for students.

Future plans include utilizing Top Hat in our CHEM 1151/1152 Survey of Chemistry I and II sequence. The Top Hat ebook is in development and expected to be released soon. No cost / low-cost options are being reviewed for CHEM 1100 Introductory Chemistry. Three of our lab classes (CHEM 1100L Introductory Chemistry Lab, CHEM 1211L and CHEM 1212L Principles of Chemistry Lab I and II) already use no cost, department prepared lab handouts. We eventually hope to dispense with all purchased lab manuals for all lab classes and replace them with instructor prepared resources.

September 1, 2016

Mr. Jeff Gallant
ALG Program Officer for Open Educational Resources
Affordable Learning Georgia

Dear Mr. Gallant,

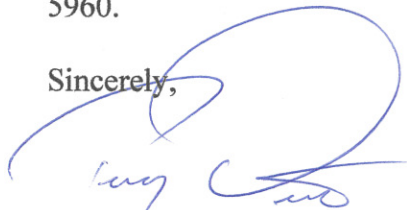
The College of Coastal Georgia (CCGA) fully supports the application for a Round Seven Textbook Transformation Grant for a Large-Scale Transformation from Affordable Learning Georgia that is being submitted by Dr. Colleen Knight, Chair of the Department of Natural Sciences, her Chemistry colleagues, and our Director of e-Learning.

The College of Coastal Georgia is firmly entrenched in the concept of providing accessible, low-cost, high quality course materials to its students as evidenced by a successful Round Two Textbook Transformation Grant for a Large-Scale Transformation from the Department of Mathematics and Round Six Textbook Transformation Grant for a Standard-Scale Transformation from the Department Social Sciences in the area of Psychology. Dr. Knight and her colleagues will continue to expand this project to provide low cost textbooks to students in the area of Chemistry. The redesign of four chemistry courses that are required courses in our BS in Biology major will provide each student over \$400 in savings. The potential annual savings for our students will be in excess of \$87,000. All Chemistry faculty are fully engaged and supportive of this project. The expertise and passion for helping students will be the model for others at CCGA and across Georgia to follow when the project is implemented.

Many students who attend CCGA have a difficult time obtaining all of the needed materials for their classes. This will certainly be another step in the right direction to make college affordable and accessible to all Georgians.

The Office of Academic Affairs is in complete support of Dr. Knight and her colleagues in their application and implementation of their Textbook Transformation Grant Proposal. If you have any questions regarding this support letter, please do not hesitate to contact me at (912) 279-5960.

Sincerely,



Dr. Tracy Pellett,
Vice President for Academic Affairs
Interim Vice President for Advancement
College of Coastal Georgia
tpellett@ccga.edu

September 1, 2016

Mr. Jeff Gallant

ALG Program Officer for Open Educational Resources
Affordable Learning Georgia

Dear Mr. Gallant,

This letter is to extend my full support to the large-scale textbook transformation grant proposal submitted by the Chemistry faculty at the College of Coastal Georgia. I am extremely excited about this project as I have been involved from the beginning with affordable learning Georgia and I have seen the difference this makes in our students and our faculty.

This grant application represents a giant leap into the total transformation that is occurring at the College of Coastal Georgia, the State of Georgia and the United States. Starting with the Department of Mathematics with the large-scale textbook transformation that has been fully and successfully implemented, continuing with the Psychology grant awarded and now, this is another large-scale textbook transformation taking place in the Chemistry Department.

This is without a doubt the result of the commitment and vision of the faculty in the Chemistry Department to PROVIDE affordable, high quality education to the students of Georgia, to PROMOTE the use of high quality, yet affordable educational resources, and to PROPEL our School, College and student to a brighter future in which affordability and quality go hand in hand.

Thank you for supporting our Chemistry Department by offering the opportunity to participate in this project. If you have any questions regarding this support letter, please do not hesitate to contact me at (912) 279-5946.

Sincerely,



Dr. Victor Vega
Interim Dean, School of Arts and Sciences
College of Coastal Georgia
vvega@ccga.edu

**Affordable Learning Georgia Textbook Transformation Grants
Rounds Six, Seven, and Eight
For Implementations beginning Fall Semester 2016
Running Through Fall Semester 2017**

Proposal Form and Narrative

| | |
|----------------------------------|---|
| Submitter Name | Andrea Wallace |
| Submitter Title | Assistant Vice President for Academic Affairs / Professor of Chemistry |
| Submitter Email | awallace@ccga.edu |
| Submitter Phone Number | 912-279-5931 |
| Submitter Campus Role | Academic Affairs |
| Applicant Name | Colleen Knight (Primary Principal Investigator) |
| Applicant Email | cknight@ccga.edu |
| Applicant Phone Number | 912-279-5937 |
| Primary Appointment Title | Assistant Professor of Chemistry and Chair, Department of Natural Sciences |
| Institution Name(s) | College of Coastal Georgia |
| Team Members | Colleen Knight, Assistant Professor of Chemistry, cknight@ccga.edu Leon Gardner, Associate Professor of Chemistry, lgardner@ccga.edu Joseph Lodmell, Lecturer of Chemistry, jlodmell@ccga.edu Ernest Pascoe, Part-time Instructor of Chemistry, espascoe@ccga.edu Andrea Wallace, Professor of Chemistry, awallace@ccga.edu |

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|--|--|--|----|---|-----|
| | Lisa McNeal, Director of e-Learning, lmcneal@ccga.edu | | | | |
| Sponsor, Title, Department, Institution | Tracy Pellett, Vice President for Academic Affairs, College of Coastal Georgia | | | | |
| Proposal Title | Top Hat for Principles of Chemistry and Organic Chemistry Sequences – An Accessible, Quality, Low-Cost Resource | | | | |
| Course Names, Course Numbers and Semesters Offered | CHEM 1211, Principles of Chemistry I, Fall/Spring/Summer CHEM 1212, Principles of Chemistry II, Fall/Spring/Summer CHEM 2211, Organic Chemistry I, Fall/Spring CHEM 2212, Organic Chemistry II, Fall/Spring | | | | |
| Final Semester of Instruction | Fall 2017 | | | | |
| Average Number of Students Per Course Section | 24 | Number of Course Sections Affected by Implementation in Academic Year | 24 | Total Number of Students Affected by Implementation in Academic Year | 576 |
| Award Category (pick one) | <input checked="" type="checkbox"/> No-or-Low-Cost-to-Students Learning Materials <input type="checkbox"/> OpenStax Textbooks <input type="checkbox"/> Interactive Course-Authoring Tools and Software <input type="checkbox"/> Specific Top 100 Undergraduate Courses | | | | |
| List the original course materials for students (including title, whether optional or required, & cost for each item) | CHEM 1211/1212 Principles of Chemistry I and II – Chemistry: An Atoms-Focused Approach by Natalie Foster, Thomas Gilbert, and Rein Kirss with Ebook and SmartWork Registration card - \$156.25 – Required CHEM 2211/2212 Organic Chemistry I and II – Organic Chemistry, 9 th ed. by John McMurry with OWL v2 24 month printed access card - \$386.95 - Required | | | | |

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| | |
| Requested Amount of Funding | \$29,900 |
| Original Per Student Cost | CHEM 1211/1212 - \$156.25 CHEM 2211/2212 - \$386.95 |
| Post-Proposal Projected Per Student Cost | CHEM 1211/1212 - \$60 (includes online homework access) per student over a two semester period CHEM 2211/2212 - \$65 (includes online homework access) per student over a two semester period |
| Projected Per Student Savings | CHEM 1211/1212 - \$96.25 per student CHEM 2211/2212 - \$321.95 per students |
| Projected Total Annual Student Savings | CHEM 1211/1212 - \$96.25 x 432 = \$41,580 CHEM 2211/2212 - \$321.95 x 144 = \$46,360.80 Total = \$87,940.80 per academic year |
| Creation and Hosting Platforms Used | Top Hat software and ebook, and D2L |

NARRATIVE

1.1 PROJECT GOALS

The main goals of this project are to provide an accessible, low-cost option for our students while providing a quality product that will enhance student success in the Principles of Chemistry and Organic Chemistry sequences for our Science majors. Please note that the use of Top Hat is a low-cost option as opposed to a no-cost option. However, Top Hat provides a number of advantages. 1) Top Hat provides an e-text that is available through a variety of platforms including an app on an ipad/iphone/Android. Instructors have complete freedom to add or remove text. The changes become available to the students immediately through the

app. 2) Questions are embedded in the reading. Instructors may add additional questions as desired. To encourage preparation for class, students may be assigned these questions within the text and may be graded based on participation and/or correctness at the instructor's discretion. 3) PowerPoints in which questions can be embedded and answered by students in real time with analysis collected by the instructor are incorporated into the presentation software. 4) Instructors may annotate the PowerPoint presentation during class using an iPad/Android device. These are preserved for later student review. Students' annotations of the presentation on their device are also preserved for later review. 5) Online homework is included in the cost (\$60 for CHEM 1211/1212, used for two semesters, and available for life / \$65 for CHEM 2211/2212, used for two semesters, and available for life). If the OpenStax text were utilized for the Principles of Chemistry courses, WebAssign online homework would still need to be purchased by the students at a cost of \$33.95 per semester or \$51.90 for a multi-term subscription per textbook. 6) There is no OpenStax option for Organic Chemistry. Utilizing Top Hat throughout the four semester progression of chemistry classes will provide continuity and enhance learning since students will not have to learn a new system each time they begin a new chemistry course. 7) Top Hat texts remain available to the students for life and they may access the version of the textbook they used or the most current textbook. The text can be printed if the students prefer this option.

In conclusion, students will be provided not only a low-cost option for CHEM 1211/1212/2211/2212, but they will also have a much improved, customized product that can be easily accessed through any mobile device.

1.2 STATEMENT OF TRANSFORMATION

At the College of Coastal Georgia, the Bachelors of Science in Biology is one of the most popular programs experiencing much growth over the years and currently having well over 300 majors enrolled in classes. All Biology majors are required to take the four semester sequence of Chemistry courses including CHEM 1211, 1212, 2211, and 2212. In addition, many of our Associate of Science majors, Bachelors of Science in Mathematics majors, etc. will take two or more of these chemistry courses. The texts that are currently in use for these courses are quite costly and what is found is that many of our students attempt to take the course without purchasing a textbook. Approximately 82% of CCGA students receive financial aid and simply cannot afford the high expense of Science textbooks thus limiting accessibility and lowering completion rates due to a lack of resources.

By the end of Spring 2018, Top Hat will be fully incorporated into the four semester sequence set of courses and have students experiencing a seamless transition from one course to the next since they will learn the system in CHEM 1211 and carry this knowledge through all four classes. They will be able to complete the sequence spending only \$125 for materials which previously would have cost approximately \$543 saving them over \$400 per student and allowing them to have experienced superior resources than those previously available. The transition to Top Hat will begin as a pilot project in each course beginning with CHEM 1211 in

Fall 2016 and then complete implementation in all sections during the second semester the course is taught. During the second term teaching with Top Hat with a course, a full array of enhanced lecture/PowerPoint notes, a fully customized text, online exercises within the text, online homework, study guides, etc. as well as full integration of the grading system and other material into D2L will be accomplished.

Our ultimate goal is to provide students with excellent resources at low cost and promote student success. All team members which include a variety of professors/lecturer/part-time instructor/instructional design specialist are all at different stages in their careers and all provide a unique perspective to this project. All team members are fully engaged in this project and will work to provide a quality product that will lead to higher student success in Chemistry classes that are known for having high DFW rates.

1.3 TRANSFORMATION ACTION PLAN

The entire team was involved in the identification, review, selection, and adoption of Top Hat. A representative from the company made a presentation to our group and we were all given access to materials to review on our own after the presentation. All members of the team fully support the concept of a low-cost text which provides more options from a teaching and learning standpoint.

Course syllabi for CHEM 1211, 1212, 2211, and 2212 will be aligned with the Top Hat customized texts that will be created by the team. A common set of learning objectives will be developed and utilized for each course. Course materials – lecture notes, customized texts, online exercises and homework, study guides, etc. will be placed on D2L and made available to all instructors. Our instructional designer will help us with connecting Top Hat to D2L.

Role of each team member:

Dr. Colleen Knight will serve as the coordinator for the entire project. Her responsibilities will include: 1) overseeing the entire project, 2) collecting and collating assessment data, 3) organizing regular meetings with the team to gather information, share materials, and analyze assessment results, and 4) submitting status and final reports.

Dr. Lisa McNeal will provide assistance with instructional design for the entire project. She will assist with online materials and seamless transition of information between the Top Hat app and D2L.

Each of the remaining Chemistry faculty will be assigned as a coordinator for a particular course. The coordinator will be responsible for formulating learning objectives for their assigned course based on input from all instructors, assembling all of the course materials and making them available to other full-time and part-time faculty that teach that particular course,

and gathering assessment data for their assigned course and providing it to the primary principal investigator.

Dr. Leon Gardner will serve as the CHEM 1211 coordinator.
Capt. Joseph Lodmell will serve as the CHEM 1212 coordinator.
Dr. Ernest Pascoe will serve as the CHEM 2211 coordinator.
Dr. Andrea Wallace will serve as the CHEM 2212 coordinator.

All Chemistry faculty members who teach these courses will be expected to provide input including assessment data to the coordinators.

Top Hat access codes may be purchased through the CCGA bookstore or online. D2L access is available for all students registered in these courses.

1.4 QUANTITATIVE AND QUALITATIVE MEASURES

Both qualitative and quantitative measures will be employed to evaluate the effectiveness of Top Hat in CHEM 1211, 1212, 2211, and 2212.

Surveys will include questions on student satisfaction with the quality, accessibility, and cost of materials. Students will also be asked to provide open-ended comments on their experience using Top Hat as their textbook, on-line homework, and presentation system in class. In addition, standard student evaluations of the course which are collected every semester will be reviewed and analyzed.

The Chemistry unit currently utilizes American Chemical Society Standardized Exams in all of these courses. We will continue to give these exams and compare our scores before and after the introduction of Top Hat. In addition, we will assess DFW rates before and after the introduction of Top Hat. This set of data should provide an excellent quantitative analysis of the success of this project.

1.5 TIMELINE

Fall 2016

Pilot Top Hat in four sections of CHEM 1211. Prepare class materials (syllabus, customized text, PowerPoint presentations / lecture notes, online exercises and homework, study guides, and exams).

Spring 2017

Fully implement Top Hat into all sections of CHEM 1211. Continually evaluate and improve all class materials.

Pilot Top Hat in at least two sections of CHEM 1212 and one section of 2211. Prepare class materials (syllabus, customized text, PowerPoint presentations / lecture notes, online exercises and homework, study guides, and exams).

Summer 2017

Fully implement Top Hat into all sections of CHEM 1211 and 1212. Continually evaluate and improve all class materials.

Fall 2017

Pilot Top Hat in one section of CHEM 2212. Prepare class materials (syllabus, customized text, PowerPoint presentations / lecture notes, online exercises and homework, study guides, and exams)

Fully implement Top Hat into all sections of CHEM 1211, 1212, and 2211. Continually evaluate and improve all class materials.

Spring 2018

Full implementation of Top Hat into all sections of CHEM 1211, 1212, 2211, and 2212 is complete.

Status reports will be submitted at the end of Spring 2017 and Summer 2017. A final report will be submitted at the end of Fall 2017 after all courses have been taught using Top Hat at least once.

1.6 BUDGET

Team members will receive salary supplements of \$4850 each for their contributions to this project. Dr. Knight and Dr. Wallace will receive an additional \$400 each to cover travel expenses to attend the mandatory kick-off meeting on October 17, 2016.

Team Member Salary Supplements

Dr. Colleen Knight - \$4850 (salary supplement) + \$400 (travel)

Dr. Andrea Wallace - \$4850 (salary supplement) + \$400 (travel)

Dr. Leon Gardner - \$4850 (salary supplement)

Capt. Joseph Lodmell – \$4850 (salary supplement)

Dr. Ernest Pascoe – \$4850 (salary supplement)

Dr. Lisa McNeal - \$4850 (salary supplement)

Total Request - \$29,900

This budget falls within the guidelines of the Large-Scale Transformation for multiple courses and department-wide adoptions with 500 or more students enrolled per academic year.

1.7 SUSTAINABILITY PLAN

The plan is to develop and implement course materials associated with the Top Hat texts and platform for CHEM 1211, 1212, 2211, and 2212 within the time frame of Fall 2016 through Fall 2017. Full implementation with tested and refined course materials will be fully operational in Spring 2018 for all four courses. Based on qualitative and quantitative evaluations that will be done each semester, improvements in course materials will be made as needed. The team will plan to meet at least once each semester to analyze, develop, and implement any new materials that are needed based on assessment data. The plan is to use Top Hat and associated materials indefinitely. After implementation is complete, there should be no additional costs only immense savings for students.

Future plans include utilizing Top Hat in our CHEM 1151/1152 Survey of Chemistry I and II sequence. The Top Hat ebook is in development and expected to be released soon. No cost / low-cost options are being reviewed for CHEM 1100 Introductory Chemistry. Three of our lab classes (CHEM 1100L Introductory Chemistry Lab, CHEM 1211L and CHEM 1212L Principles of Chemistry Lab I and II) already use no cost, department prepared lab handouts. We eventually hope to dispense with all purchased lab manuals for all lab classes and replace them with instructor prepared resources.

1.8 REFERENCES & ATTACHMENTS

Letters of Support

- Dr. Tracy Pellett, Vice President for Academic Affairs
- Dr. Victor Vega, Interim Dean, School of Arts & Sciences