Thank you for taking the time to complete your unit/department's Annual Assessment Report. Assessment is on ongoing and systematic process aimed at understanding and improving student learning, the environment for student success and college operations. To demonstrate that Temple is fully compliant with Middle States standards on assessment and institutional effectiveness, we must document our assessment processes and the uses of assessment information for improvement. We have designed the following report to streamline the collection of assessment information.

Unit/Department Name:

CST Professional Development

Sub-Unit Name (if applicable):

(Ex: Compensation)

Contact Name (Who can we reach out to if we have a question about the report?):

Rose McGinnis

Contact Email:

mcginnr@temple.edu

Section 1: Professional Association or Standards

Is there a professional association that outlines standards for best practice in your area of higher education? (Examples: CAS – *Council for the Advancement of Standards*, Student Affairs; NACADA – *National Academic Advising Association* – Academic Advising; NACE – *National Association of Colleges and Employers* – Career Center)

☒ Yes
☐ No

If yes, what is the name of the association/organization?

NACE – National Association of Colleges and Employers **CUR – Council on Undergraduate Research**

Section 2: Mission & Program Outcomes

Good assessment begins with well-defined and clearly articulated Program Outcomes (POs) aligned with the mission of the department/unit. POs are overarching expectations of support provided by the unit/department and are focused on the delivery of services, processes, activities or functions to students, faculty or staff. POs are unlikely to change from year-to-year unless there are substantial changes to the mission of your unit. POs should be "SMART": Specific, Measurable, Attainable, Relevant and Time Related.

What is your department's/unit's mission statement? (Optional)

> **The College of Science & Technology (CST) Professional Development Unit is the resource that guides the CST student's unique needs in the areas of career development and undergraduate research which is a key piece of professional development for many science & technology majors.**

Please list your unit/department's (or sub-unit/department's) Program Outcomes:

1.	Deliver targeted science & technology specific professional development services and events to CST undergraduate students on an individual and group basis.
2.	Engage employers who are interested primarily in science & technology majors in recruitment events for networking, internships and full time employment opportunities
3.	Work with faculty to design and offer a diverse set of undergraduate research projects across all CST disciplines which will enhance the student's exposure to a more intensive, longer term research opportunity outside the classroom.
4.	Qualify, prepare and monitor the undergraduate CST students who are engaging in undergraduate research.
5.	Identify, select and monitor a cohort of high performing science & technology students (Science Scholars) to prepare them for prestigious opportunities to complete and showcase their research experiences via the completion of papers, conferences, awards and scholarships.

We recommend 3-5 Program Outcomes, the number of outcomes is up to your department. If you have more than 5 POs, just add rows to the Table and add the additional outcomes.

Section 3: Completed Assessment Activity Since 2015

In this section, you will provide details about program level assessments your unit/department has completed since 2015. We ask you to describe the assessment(s), tell us about the findings, describe how and with whom you shared the findings and tell us how you used (or plan to use) the findings for making improvements. Examples of assessments include: surveys (including university-wide survey such as NSQ, TUSQ or NSSE), focus groups, activity volume, log data, transactions, and pre/post-tests.

Assessment Strategy 1

Describe the assessment strategy. Please provide enough detail so that we understand the nature of the project.

To ensure that our CST Job Fairs (held twice a year) are meeting the needs of our employers and our students we monitor a variety of data about each event and the attendance at each event. We also conduct post event surveys after each event. We engage in verbal conversations with each employer at each event to ensure that we understand their needs and are able to prepare our students for the opportunities that they are seeking to fill. Measures that we monitor are:
1) Employer attendance broken down by industry, skills set, type of opportunity they are hiring for (internships vs full time).
2) Student (and alumni) attendance broken down by major and graduation year
3) Survey data on quality of the event from both the employer and student perspective

From the list of Program Outcomes above, which POs were assessed using this strategy? Just list the number of the PO(s) assessed.

#1 and #2

What were the findings from this assessment?

Since Fall 2014 we have seen an 33% increase in employer participation at our Fall Job Fair (Fall 2014 – 51 Employers –- Fall 2017 - 68 Employers) and a 46% increase in our Spring Job Fair Employer numbers (Spring 2014 – 43 Employers – Spring 2017 – 63 Employers).

Since Fall 2015 we have seen an 16% increase in student registration at our Fall Job Fair (Fall 2014 – 431 students registered -- Fall 2017 – 501 students registered)

We have also seen a 50 % increase in the number of employers seeking to recruit students with science majors. (Spring 2014 – 10 Employers -- Spring 2018 – 15 Employers).

Feedback from our employers is exceptional high in their response to the quality of the students that they are meeting and the preparation of those students for the professional development events.

With whom and how did you share findings from this assessment? Check the box next to the person/group(s) with whom you shared the findings and in the box tell us HOW you shared the data with them. For example, you may share findings at a meeting, in an email, in a one-on-one meeting, or via a website.

☒ **Department/Unit Staff**

How: Reviewed with College Dean's office staff

☐ **Department/Unit Leaders**

How:

☒ **Students**

How: Shared via email communication to all CST student populations

☐ **Faculty**

How:

☐ **University Administration/Leadership**

How:

☒ **External Community Members**

How: Shared via email communication to employers who attend the events

☐ **Other**

Who:
How:

How did you use or how are you planning to use the findings from this assessment for improvement? Where applicable, give specific examples of changes you make (are making) as a result of your findings.

A key finding from the responses to the student surveys is that students are looking to talk to more science focused organizations. To help us locate these we have engaged with the University Career Center Employment coaches to charge them with assisting us locate and engage additional "science focused" companies who are willing to attend our events and recruit our science majors. Employers also consistently asked us to move our job fair in the Fall and Spring up further in the calendar as their hiring cycles are now earlier than they once were. As a result our 2017 events where at least 2 weeks earlier than previous years.

Describe the assessment strategy. Please provide enough detail so that we understand the nature of the project.

> **Deliver measureable communication to students in a summary fashion with important career events and opportunities.**
>
> **We now engage the email tool – Campaigner - to improve communication with our CST students. Students are added to the communication when they enter or transfer into CST. To enable CST alumni to continue to receive these timely opportunities we allow them continue to receive the emails after they graduate or they can choose to opt out of the communication. We use this tool to send communications to students typically no more than once a week and use a summary method to allow them to open the email quickly – see what is contained and then act on the items that are of interest to them.**
> **The tool allows us to measure the students/alumni who open the communications – see what they choose to click on and ensures that when a student indicates that they were unaware of something that we can verify that they received the information but choose not to act on it. We can narrow these communications to a sub population such as for the CIS subpopulation as they tend to have more technical opportunities and we do not want the other majors to have to wade through these if they are not important to them.**

From the list of Program Outcomes above, which POs were assessed using this strategy? Just list the number of the PO(s) assessed.

> **#1**

What were the findings from this assessment?

> **We are now able to measure the number of students who open/read their emails and can resend emails to just those students who have not opened the emails that are critical to them. By allowing CST Alumni to continue to receive these emails we have been able to continue to maintain a relationship with our alumni in the area of professional development. This relationship has built a community of CST alumni who now use this email communication to post jobs to our current students from their employers. They have seen it work when they were students and now ask us to put their opportunities into the weekly emails so that they are available to current CST students. It has allow us to build a continuous community of CST students and alumni all focused of providing opportunities.**
>
> **We now have over 7400 CST students and alumni on our lists (anyone can opt out at any time) and on average we have between a 31% to 48% open ratio depending on the target of the email and the time of year. This open ratio will decrease slightly as we have more alumni on the list who may not open them as frequently as current students.**

With whom and how did you share findings from this assessment? Check the box next to the person/group(s) with whom you shared the findings and in the box tell us HOW you shared the data with them. For example, you may share findings at a meeting, in an email, in a one-on-one meeting, or via a website.

☒ **Department/Unit Staff**

How: Data is available to all department staff members and is reviewed by the Director each week

☒ **Department/Unit Leaders**

How: Data is available to Unit leaders

☐ **Students**

How: Can send us information that they think should be contained in the weekly emails

☐ **Faculty**

How: Can send us information that they think should be contained in the weekly emails

☐ **University Administration/Leadership**

How:

☒ **External Community Members**

How: Employers are aware of our communication method and we will provide our metrics if requested

☐ **Other**

Who: Other Temple departments and organizations like the Office of Pre Professional Health can send us information that they think should be contained in the weekly emails
How:

How did you use or how are you planning to use the findings from this assessment for improvement? Where applicable, give specific examples of changes you make (are making) as a result of your findings.

A change we would like to make is to be able to identify those on the list who are alumni so we can complete better analysis and targeting of message. We would also like to survey the students to see what other communication methods we should use to let them know about events and opportunities. We would do this with focus groups and surveys.   We must continue to analyze the best methods for student communication. If they do not know what is going on or is available they will not attend or miss opportunities that could make an impact on their professional development.

Describe the assessment strategy. Please provide enough detail so that we understand the nature of the project.

Each semester we communicate with all of the CST Faculty as well as the research faculty we have built relationships with on the Health Science campus to create, gather and enhance the numerous undergraduate research projects which are made available to the URP approved students.

We documents these projects and provide them to the students via both email communications as well as make them available via the URP web site. This allows students to review the full list of projects - research the researchers - analyze which research projects best fit their professional goals and interests and then apply to a variety of those projects which are of interest to them via formal communication with the Principle Investigator (PI).

We review these research projects in detail to ensure that each student will have a unique research opportunity, complete detailed analysis, have defined learning objectives and will enhance their skill set via their opportunity to complete hands on learning on a level not available in a traditional class room environment.

From the list of Program Outcomes above, which POs were assessed using this strategy? Just list the number of the PO(s) assessed.

#3

What were the findings from this assessment?

We continue to see increases in the number of faculty projects that are listed for the students to participate. Since the Spring of 2011 to the Spring of 2018, we have seen an almost a 300% increase in the number of faculty research projects from 75 projects to 212. This diversity of projects improves the student's ability to customize their research experience to areas that are of most interest to them so they can explore science in a more hands on environment and assess if a career involving research is right for them.

We have also assessed that many faculty who list projects in hopes of obtaining research students do not find a student to work with. The reasons for this are – 1) poor communication on the part of the students and the faculty 2) students lack of experience in obtaining the research they desire 3) the need for more intervention in the student – faculty matching process so that projects do not go unfilled when there are qualified students who can accomplish the work.

With whom and how did you share findings from this assessment? Check the box next to the person/group(s) with whom you shared the findings and in the box tell us HOW you shared the data with them. For example, you may share findings at a meeting, in an email, in a one-on-one meeting, or via a website.

☒ **Department/Unit Staff**

How: Data is shared with the CST Deans office staff

☐ **Department/Unit Leaders**

How:

☒ **Students**

How: URP Approved students are made aware of unfilled opportunities via email

☐ **Faculty**

How: Communication via email

☐ **University Administration/Leadership**

How:

☐ **External Community Members**

How:

☐ **Other**

Who:
How:

How did you use or how are you planning to use the findings from this assessment for improvement? Where applicable, give specific examples of changes you make (are making) as a result of your findings.

We are working with faculty to improve their project descriptions to make them clearer to undergraduate students. We would like to increase professional resources to assist in the student matching process to engage in more one to one assistance with students and faculty so students are exposed and understand projects that are currently going unfilled will become more attractive. We would like to increase Professional resources to better track the outcomes of students in each of the faculty member labs – survey what their experience was like – track any papers or conferences they attended to determine and document the educational value with the research experience.

Describe the assessment strategy. Please provide enough detail so that we understand the nature of the project.

> 1) **Undergraduate CST students who wish to participate in the Undergraduate Research Program (URP) must complete and submit an online application within a 10 day application period. When the deadline passes the CST Dean's office completes an assessment of all of the students who applied. This assessment verifies that they are eligible to participate and that they meet the academic requirements of the program. This assessment requires an analysis of the CST courses they have taken and the student's success in those classes - they must have a 2.75 CST GPA as well as a University GPA of 2.75. We also review their success in the Math curriculum and ensure that they have completed enough CST courses to be of value in the lab.**
>
> 2) **Analyze the number of CST students who complete research as part of their academic career upon graduation. Each May we review the graduation populations and determine if each student has participated in any one of many undergraduate research programs that the college/university offers. This provides us with the percentage of the class graduating who has participated in research. In May 2016 the number was 25% in May 2018 the number was 39%. (This assessment includes – Summer Merit, CARAS & Diamond Scholars, URP, SSP, Veley, AMP, MARC, & non program specific research that is taken for course credit in each department).**

From the list of Program Outcomes above, which POs were assessed using this strategy? Just list the number of the PO(s) assessed.

> #4

What were the findings from this assessment?

> 1) **The URP approval assessment consistently provides the following outcomes.**
> **Typically - 50% of the students who apply are approved to do research**
> **50% of those students who are approved find a match and engage in research in the semester in which they applied.**
>
> **The reasons students are not approved are that they have not completed the required CST course work or have not met the academic requirements. The reason they do not match is typically they do not actively engage in the necessary process to find a research assignment or they decide that their academic schedule will prevent them from devoting the time necessary to complete research.**
>
> 2) **The analysis of May graduates who complete research has been very promising. With the variety of programs and the consistent focus on the importance and benefits of undergraduate research we have seen a significant improvement in the number of students participating in research as part of their academic career.**

With whom and how did you share findings from this assessment? Check the box next to the person/group(s) with whom you shared the findings and in the box tell us HOW you shared the data

with them. For example, you may share findings at a meeting, in an email, in a one-on-one meeting, or via a website.

☒ **Department/Unit Staff**

How: Data is shared with the Deans office

☐ **Department/Unit Leaders**

How:

☒ **Students**

How: Each student who applies is notified of their status and the reasons they may not have been accepted.

☒ **Faculty**

How: Faculty members are notified about all of the student who have been approved to participate

☐ **University Administration/Leadership**

How:

☒ **External Community Members**

How: The Dean provides that total research percentage as part of his commencement remarks to the graduating class

☐ **Other**

Who:
How:

How did you use or how are you planning to use the findings from this assessment for improvement? Where applicable, give specific examples of changes you make (are making) as a result of your findings.

We continue to educate and communicate with our students about the importance of utilizing research as part of their academic experience. We stress both the soft skills and hard skills that research provides and encourage students to find the research setting that best suits their needs. We seek to improve the ratio of students who find a research match by providing more assistance in the matching process so that fewer research opportunities go unused by the students. We will communicate the great success of 39% of CST students who graduate have completed research in our marketing materials and in communication with our students so they see the value and need to perform research and the differentiation that it will provide them in their goals to continue their education in graduate or professional school or with employment opportunities.

Describe the assessment strategy. Please provide enough detail so that we understand the nature of the project.

> 1) Review the cohort of Fall incoming freshman class for students who have been designated as high performers by either being identified as CST Honors students of have exceptional ACT/SAT math scores. Invite a subpopulation of that cohort to apply for the Science Scholars program (SSP). Review the applications from that cohort pool with a committee of diverse CST Faculty to determine and select those students who focus is not on a medical career but on research. (10-15 incoming freshman are selected each summer)
> 2) Review the academic performance of rising sophomores who have outstanding freshman academic performance who have not been selected for SSP and invite them to apply as rising sophomores. They too complete an application and are reviewed by a committee for selection (5-8 students are selected each summer)
> 3) At the end of each semester, all students in SSP (approximately 55 in total) receive a full review of their academic and research progress for continuation in the program and for determining which external programs/scholarships/awards/opportunities they should be made of aware of and prepared to apply. Students are then "groomed" for these awards and are engaged with the office of Fellowship and Scholarship for additional opportunities.

From the list of Program Outcomes above, which POs were assessed using this strategy? Just list the number of the PO(s) assessed.

> #5

What were the findings from this assessment?

> 1) The population of incoming CST honors students is very strong but the majority of those students enter seeking a career in medicine with most unaware of research or PhD, MD/PhD programs. By exposing those students to highly productive, interesting research labs we have been able to expose them to career opportunities they may not have considered.
> 2) In the past we have observed that there were a group of CST students who were not selected for the honors program for a variety of reasons when they entered the university. These students may then not have been identified as high potential performers until later in their academic career – thus being too late for opportunities that they should have been made aware of and targeted for. This analysis of rising Sophomores has proved that we are able to identify these students in time to ensure they are made aware of opportunities that they are eligible to pursue and encourage and support them as they do so.

With whom and how did you share findings from this assessment? Check the box next to the person/group(s) with whom you shared the findings and in the box tell us HOW you shared the data with them. For example, you may share findings at a meeting, in an email, in a one-on-one meeting, or via a website.

☐ **Department/Unit Staff**

How: Shared with Dean's office

☐ **Department/Unit Leaders**

How:

☐ **Students**

How: Web site – personal letters and communication to participate

☐ **Faculty**

How: Web site and faculty make up the selection and review committee – Chairs are notified of their students

☐ **University Administration/Leadership**

How: Work closely with Honors and the Fellowship and Scholarship office

☐ **External Community Members**

How:

☐ **Other**

Who:
How:

How did you use or how are you planning to use the findings from this assessment for improvement? Where applicable, give specific examples of changes you make (are making) as a result of your findings.

Completing a more though annual review of the SSP cohort to ensure that students are performing within the program guidelines and ensure that they are still on a research focused path.

If you have more strategies to report, just copy and paste all the questions/prompts and create as many additional assessment strategy sections as you need.

Section 4: Other Changes based on Trends/Strategic Plan

Sometimes you make changes based on trends in higher education, new strategic plans or initiatives at the university, or for other reasons. In this section, you will describe changes made based on trends/strategic plans and how you plan to assess the effectiveness of the change.

Describe what change you made and what you based this change on.

> **One challenge that all Career Centers and Professional Development organizations face is that the majority of our students do not take advantage of many of the programs that we offer. They feel they are too early, too late, do not know enough, are not good enough, or just do not take the time to walk away from their academic requirements to spend time working on their soft skills or professional development.**
>
> **What we are trying to incorporate is – "Just in Time" services. What this means is to observe what the students need during a week or month of the year and provide those services rapidly to the audience in a short – value added approach.**
>
> **For example, we noticed that many students were coming in to our office in late April seeking internships who had done nothing that year to find one or have a resume or know what to do. So we held a half hour – 5pm - "How to get an Internship" session on a Tuesday night. We told students about it via an email at Noon that day – we called it a "POP UP SESSION" and we had over 50 students attend. Their feedback was that it was the best session they attended and well worth their time.**
>
> **We hope to do more of these this year – which requires flexibility on our part and a rethinking of how we deliver services.**

Tell us how you plan to assess the effectiveness of the change.

> **We will assess the effectiveness with survey feedback and by increasing the total number of CST students who use our services which we will measure via tracking attendance at our events via student swipe in of their ID Cards.**

Section 5: Annual Objectives (optional section)

Do you have any unique goals/objectives for the year? If so, describe the objective(s) and how you are assessing progress.

> Track the number of students that the CST Professional Development offices sees each semester by recording the appointments in Handshake. This way we can see the performance of our office against the number of CST students who visit the University Career Center.

Section 6: Next Steps (Planned Assessment)

Tell us about your next steps for assessing your unit/department.

What assessments are currently underway or planned for this academic year? For example, your area may have items on the TUSQ that will be administered in Spring 2018 or you might have conducted focus groups in the fall and are review in the fall and are reviewing findings.

None Planned

Do you have any documents you would like to share?

Please feel free to email supporting documents in addition to your completed report. Additional documents may include: assessment plans, survey instruments, reports created for other audiences, etc. If you are including supporting documents, please tell us below what documents you are attaching.