ENTRY GUIDELINES

Revised February 2019

INTRODUCTION

The WEF® Student Design Competition is intended to promote "real world" design experience for students interested in pursuing an education and/or career in water/wastewater engineering and sciences. This competition tasks individuals or teams of student members within WEF® to demonstrate the ability to evaluate alternatives, develop a comprehensive design, and present a solution that meets the requirements of a problem statement.

For more information, contact:

Pono Hanson, Subcommittee chair for the WEF Student Design Competition
Phone: (703) 340-1081 or Email: PHanson@BrwnCald.com

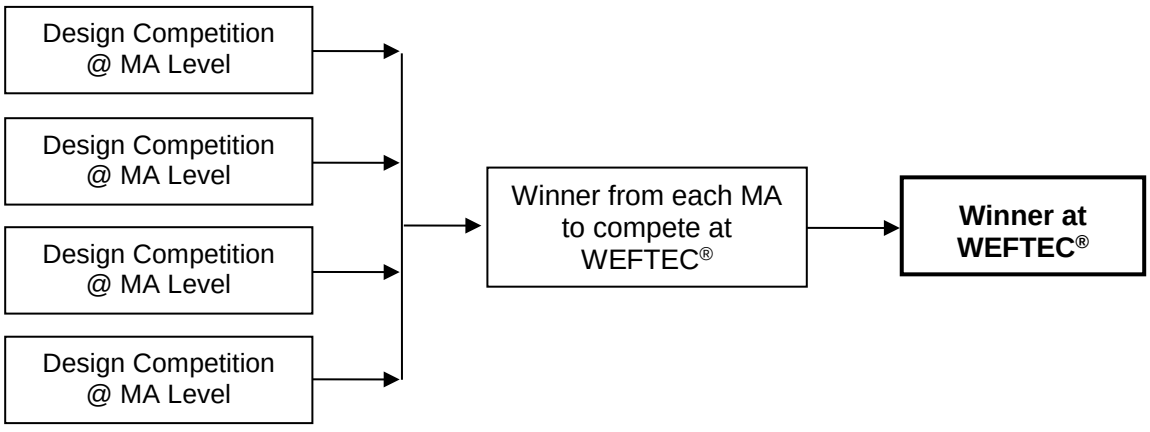
Megan Livak, Manager, Association Engagement – Students and Young Professionals
Phone: (703) 684-2459 x7220 or Email: MLivak@wef.org

The WEF® Students & Young Professionals Committee (SYPC) is always looking for interested persons to help further the activities supported by the committees. If you are interested in helping or becoming a member please contact Megan Livak.

BACKGROUND

The original student design competition concept was based on a student competition held within the Florida WEA. The concept was then expanded to the national level, which is organized by the WEF® SYPC. A WEF® Student Design Competition Subcommittee was formed to lead the effort in establishing a WEF® Student Design Competition to be held annually at WEFTEC. The WEF® competition is intended to be the culmination of various member association (MA) level competitions (typically at the state or regional level) where the student groups, who won their MA's competition, will compete at WEFTEC.

The competition promotes interest and skills that will prove to be extremely valuable as students enter the professional world. It is the intent of the WEF® Student Design Competition Subcommittee to promote this competition at the MA level as well as nationally. These guidelines represent a general guide to what the Subcommittee envisions, however, not every MA or student group will be able to follow these directly. Below is a schematic of the ***intent*** of this competition.



Each MA will choose a design problem for its competition(s) (traditional wastewater and/or water environment) and distribute the problem(s) to participating schools within the MA. Alternatively, MAs may allow each school to choose an individual design problem that meets the guidelines set

forth herein. Typically, students will be given a semester period of time to conduct their alternatives analysis and finalize their design with the appropriate recommendations. If more than one school or student group participates, student teams will present their designs during a Student Design Competition held at the MA level. The winner of each MA competition will be invited to compete in the WEF® Student Design Competition held at WEFTEC later that year. An individual MA may elect to hold a competition in each of the wastewater and water environment categories and provide teams to compete in both competitions at WEFTEC.

If there is only one participating school within the MA, that school's student team may compete at WEFTEC, assuming they meet the guidelines set forth herein, at the discretion of the Subcommittee. If a team chooses to participate in a single MA or joint MA competition (teams from 2 or more MAs in a single competition) and are not the winner of the competition, they may not participate in the WEF® Student Design Competition. If multiple schools are willing to participate but their MA does not host a MA level Student Design Competition, the MA is required to decide which of the interested schools will represent the MA and notify the WEF® Student Design Competition Subcommittee at least one month prior to the entry form due date. These schools may be invited to compete at WEFTEC on a case-by-case basis at the discretion of the MA and the WEF® Student Design Competition Subcommittee. If no single school decides to put forth a team, then interested students from different schools are invited to form their own team. Teams of this nature must be made up of students from the same MA. All teams must have the support of the MA to participate at the WEF® Student Design Competition. Furthermore, it is at the discretion of each MA to adopt and/or change rules of these guidelines as needed to suit the MA in order to have a successful competition at the regional MA level.

INTENT OF THE STUDENT DESIGN COMPETITION

The student design competition is based on problems relating to protection of the water environment including sewer and pump station design, wastewater treatment plant expansions, biological treatment, reuse, constructed wetlands, sustainability efforts, stormwater management, etc. At this time, traditional drinking water treatment and distribution projects are not typically accepted for the WEF® Student Design Competition.

The WEF® Student Design Competition hosts two competitions at WEFTEC, a wastewater design competition and a water environment design competition. Students will need to specify which group they believe their project falls into.

Final grouping of each Competition (Wastewater and Water Environment) is at the discretion of the Subcommittee.

The wastewater design competition is intended to include traditional wastewater collection and treatment design projects, e.g. hydraulic capacity design, upgrades to existing treatment systems, biosolids handling, etc. The water environment design competition is intended to include contemporary engineering topics, e.g. stormwater management design, green infrastructure, low impact development, water reuse, wetland construction, distributed treatment systems, systems in developing countries, etc. Both competitions will follow the same guidelines and the same scoring system. Each MA may only select one team per competition per year to participate. However, individual consideration will be given to team placement in either competition on a case-by-case basis at the discretion of the WEF® Student Design Competition Subcommittee.

The scope and extent of the project should be consistent with the level of a senior or graduate engineering/science design or capstone course. Students are expected to work with little assistance from an advisor, professor, and/or industry professionals/consultants. The students

are expected to work together as a team to recommend a complete engineering design solution. Students may use whatever printed or digital references or resources they choose, with appropriate citations.

Students are expected to perform the necessary calculations for the project. **This is not intended to be a study or research project or literature review.** Although some initial literature review and/or research will be required, the bulk of the project should incorporate pertinent calculations for the design.

For example, if the project involved a wastewater treatment plant expansion, judges will look that each team performed some of the following:

- Decision matrix (provide why you ended up with that particular process or design etc.);
- Hydraulic profile;
- Preliminary sizing of major equipment (aeration basins, clarifiers, chlorine contact chambers, etc.);
- Incorporated information from different manufacturers;
- Population analysis to determine design flow rates; and
- Preliminary cost evaluation for both capital and operational costs.

All of the design work should be submitted in the design report, clearly labeled and referenced. See below for information regarding the report.

Timeline:

Experience and conversations with students who have participated in this type of competition in the past indicated the need for the problem statement to be given approximately 3 to 4 months prior to the competition. A sample timeline is shown below to give relative timeframes that would be ideal for the competition to be successfully completed on the MA level. It should be noted that the dates are given only as a guideline and may be adjusted to suit the MAs and/or student chapters participating. The WEF® Student Design Competition specific timeline follows later in this package.

1. MAs coordinate with the MA's Student Activities Committee to develop a problem statement and assemble design competition packets. (November)
2. MAs distribute the problem statement to interested student chapters. This would start the beginning of the competition. (January)
3. MA level competition held. (April)
4. The winner from each MA to compete nationally at WEFTEC. (September/October)

REQUIREMENTS OF THE WEF® STUDENT DESIGN COMPETITION

1. **TO BE ELIGIBLE**, each presenter must be a WEF® student member who:
    - **has** been selected by his/her student chapter to participate, and/or
    - **has** been certified by the individual member association as a WEF® student member in good standing.

    To be thus certified, a new WEF® student member must have filed an application and paid the required dues for membership before the first day of the month prior to the designated competition. The same holds true for continuing student members.

****The WEF® Student Design Competition Sub-Committee acknowledges that schools willing to participate may not have a WEF® Student Chapter. Therefore, as long as the participants are WEF® student members they will be allowed to participate.**

2. Student members who have graduated at the time of WEFTEC will be allowed to participate, if they were a registered student within the last 12 months.

3. Teams may consist of more than four members. However, a maximum of four team members shall be permitted to present. One additional team member may be on the presentation platform but shall be dedicated solely to advancing the presentation slides. If desired, additional team members may participate in the question and answer portion of the presentation.

4. MAs may select only one team per competition. Generally, the winners of the MA level student design competition will be automatically invited to compete in the WEFTEC Student Design Competitions. Additional teams may be selected based on availability at the discretion of the WEF® Student Design Competition Subcommittee.

5. Student teams will compete through a written submission and an oral presentation.

    a. Written: A design report complying with the requirements set forth in this document must accompany each entry.

    b. Oral: Each team's presentation will be 20 minutes followed by up to a 10-minute question and answer period. Team presentations will be held to the 20-minute time limitation and will be not be permitted to continue beyond the limit. The presentation files shall be saved in PowerPoint format and submitted per the requirements set forth in this document. The PowerPoint file submitted will be the version presented at the competition. Teams will not be permitted to revise the files.

    c. Both written and oral presentations are subject to questioning during the question and answer period. However, questioning is limited to the judging panel only.

CONTACT INFORMATION FOR WEF® STUDENT DESIGN COMPETITION:

WEF® SYPC Student Design Competition Subcommittee Chair:

Pono Hanson, P.E.
Brown and Caldwell, 1725 Duke Street, Suite 250, Alexandria, VA 22314
Phone: (703) 340-1081
Email: PHanson@BrwnCald.com

WEF® Staff Liaison to SYPC:

Megan Livak
Water Environnent Federation, 601 Wythe Street, Alexandria, VA 22314
Phone: (703) 684-2459 x7220
Email: MLivak@wef.org

ENTRY FEE - There is no entry fee for the WEF® Student Design Competition.

TIMELINE OF THE WEF® STUDENT DESIGN COMPETITION:

DATE	ACTION ITEM
May 3, 2019	Teams shall notify the Student Design Competition Subcommittee Chair of their intent to participate in the WEFTEC Student Design Competition. Teams shall indicate whether or not their local MA will be hosting an MA level Student Design Competition.
June 3, 2019	Teams shall complete and submit the following two electronic forms online: 1. Entry Form 2. A detailed abstract to serve as a brief summary of the design, not to exceed 200 words Access to the online electronic forms will be posted at a later time. Please regularly check the WEF Student Design Website for updates. The subcommittee will attempt to notify each MA once the online electronic forms are available. Failure to complete and submit these forms by this date will result in penalization. See Attachment A and Attachment B for potential required information that will be included in the online electronic forms.
Week of June 17, 2019	One representative member of each team shall participate in a webinar hosted by the Subcommittee to review design report submittal requirements, expectations for competition participants, and general competition questions. One team member is required to participate but other team members are permitted as well. Webinar information will be provided to the team via the contact information provided on the official Entry Form.
August 23, 2019	Electronic and hard copies of the design report are required for a complete competition entry. Teams shall submit a package containing one hard copy of the design report. Packages shall be postmarked no later than this date and addressed to the following: Brown and Caldwell ATTN: Pono Hanson 1725 Duke Street, Suite 250 Alexandria, VA 22314 A single electronic file of the compiled design report shall be uploaded to a collection site as directed. Uploads shall be completed no later than this date. Failure to adhere to this deadline date will result in penalization.
September 15, 2019	Teams shall submit a copy of the PowerPoint presentation. The PowerPoint file submitted will be the version presented at the Competition. Revisions at the Competition will not be permitted. Uploads shall be completed no later than this date. Failure to adhere to this deadline date will result in penalization.
September 22, 2019	WEFTEC STUDENT DESIGN COMPETITION in Chicago, IL.

NATURE AND MANNER OF PRESENTATIONS

It is recognized that engineering professionals must possess a well-developed ability to communicate both orally and in writing. The competition is designed to emphasize the value of delivering both high quality written and oral technical presentations. Scoring of the design will be determined through an evaluation of both the competitors' written and oral presentation skills, along with the technical content of the design solution. Written and oral skills will be evaluated separately, and the scores will be added for the total score. Scoring sheets have been developed for evaluating both the written (design report) and the oral presentations and will be used by the judges as the basis for judging all competing teams (see Scoring Sheet - Attachment C). The same panel of individuals will judge throughout each competition. Ideally, the judging panel will be comprised of members of the sponsoring companies/industry professionals.

The written submission (in electronic format) will be evaluated by the judges and scores for the written submission of the competition will be submitted to the Subcommittee prior to the oral presentations. A hard copy of the written submission will be available to the judges during the oral presentation for their reference.

Prior to the competition, teams are encouraged to practice presenting their oral presentations in front of professors, students, and/or advisors to receive feedback regarding presentation timing, content, and delivery. During the competition held at WEFTEC, the oral presentations will be evaluated by the judges. Questions during the competition question and answer session may be posed to the teams based on information contained in the presentation as well as the written submission. Questions will only be asked by the judges. Scores for the oral presentations will be submitted by the judges to the Subcommittee.

A representative of the Subcommittee will compile the written and oral presentation scores and determine the final ranking of the teams participating in the competition. All scores will be kept confidential. Judges' comments regarding that team's performance may be provided at that team's request.

The order of team presentations will be selected at random prior to the competition. Competing student teams will be allowed and are encouraged to watch other student teams' presentations. Student teams are encouraged to invite leadership and members of their MA to attend the competition.

The required Entry Form and Abstract must be submitted electronically via an online form. Access to the forms will be provided at a later date. Teams should regularly check the WEF Student Design Website for updates. The subcommittee will attempt to notify each MA once the online electronic forms are available. Once made available, the Team shall review the online forms prior to the deadline date to confirm all required information is readily available for submission. See Attachment A and Attachment B for potential information that may be required on the electronic forms.

Photographs will be taken of each participating team with WEF Leadership at a designated time, prior to the Awards Ceremony. All teams must remain on-site during this time.

DESIGN REPORT REQUIREMENTS

The hard copy of the design report shall be a single volume bound by a three-ring binder, spiral, or comb binding (not greater than 1-inch in size) and be comprised of the documents that describe the problem, alternatives evaluation, recommendations, and design solution. The

project name, university name (team name), year, and entrants' names shall be included on the front cover of the design report. If a three-ring binder is used, the project name and university name (team name) shall be affixed to the spine.

An electronic copy of the design report shall be created as a single PDF format file that is organized similarly to the hard copy report with cover pages, table of contents, report sections, and appendices, if used. The single PDF file shall be uploaded to a collection site (such as Hightail or DropBox) as directed by the Subcommittee.

The original hard copy of the report and the single electronic file must be submitted to the Subcommittee by the stated deadline. Non-compliance with these requirements may result in penalties (see below). Project materials may not be returned to teams after the competition. Teams should produce a copy of their materials for their own records.

Teams are encouraged to print their reports double-sided and incorporate sustainable practices into their submittals. Both the hard copy and electronic copy of the design report shall include, in the following order:

1. **Cover Page** – with project name, university name (team name), year, and entrants' names.

2. **Table of Contents**

3. **Entry Form** – A copy of the Entry Form submitted online will be provided to the team after completion. Please use this original entry form submitted.

4. **Abstract** – A copy of the Abstract submitted online will be provided to the team after completion. Please use the original abstract form submitted.

5. **Summary of Project Team Effort** – Provide a 1 – 2 page summary of the project team effort, including:
    - Each team member's name and role in the effort
    - Names of any other individuals that assisted in the effort

6. **Project Description** – Provide a description of the design problem, alternatives evaluation, and recommended design solution **(not to exceed 20 pages*)**, including the following information:
    - **Statement of design problem**.
    - **Discussion of alternatives evaluation** – Discussion should provide a clear description of the alternatives and evaluation technique.
    - **Description of recommended design solution** – Discussion must cover the salient facts upon which the recommendation is made, present a clear recommendation of action, and provide bases for design. Relevant data should be presented in a clear manner. All elements shown on the judging form should be addressed, including economic analysis.
    - Formatting to include a minimum of 0.75 inch margins on all sides; Calibri, Arial, or Times New Roman font with a minimum 11-point font size.
    - Pages of the Project Description portion of the report shall be continuously numbered.
    - Color diagrams, graphics, plots, and photographs may be included that reflect the unique features of the project. Each is to be identified with an appropriate descriptive caption. Graphics/photos included within the project description will count toward the 20-page limit.

***The number of pages used in the Project Description is checked to ensure compliance with the 20-page limit. Non-compliance may result in penalties (see below).**

7. **Supporting Documentation** – If needed, provide drawings, calculations, tables, vendor submittals, detailed cost estimates, and other voluminous documents, as appendices.

8. **References/Acknowledgements** – All references and resources used for this project shall be cited appropriately.

The judges will be directed to focus their review on the Project Description section of the design reports. Teams shall develop their materials such that their complete analysis and design solution may be understood from the 20 pages of material provided in the Project Description.

Teams are encouraged to use a checklist to ensure all necessary documents are included in the design reports. Failure to ensure all documents are accounted for may result in a team penalty.

The Subcommittee will not review any submittal prior to submission.

PRESENTATION REQUIREMENTS

A presentation describing the teams' design problem, approach, evaluation, design effort, and recommendations shall be created in PowerPoint format. This information will be presented by the team during the oral portion of the competition at WEFTEC. Prior to the competition, the single PowerPoint file shall be uploaded to a collection site (such as Hightail or DropBox) as directed by the Subcommittee. Teams must notify the Subcommittee of any imbedded animations or video material to confirm that this material is compatible with the computer that will be used during the competition. The PowerPoint file must be submitted to the Subcommittee by the stated deadline. Non-compliance with these requirements may result in penalties (see below). Project materials may not be returned to team after the competition. Teams should produce a copy of their materials for their own records.

JUDGING CRITERIA

WEF® is a multi-disciplined environmental professional organization dedicated to quality in practice of the profession. Accordingly, judging will be based on the elements outlined below and in the scoring sheets provided in Attachment C. Subcommittee reserves the right to adjust the format and content of the scoring sheets provided in Attachment C prior to commencement of the competition. Participating teams will be provided with a copy of the revised sheets prior to the competition if such adjustments are made.

1. DESIGN REPORT:

a. **Technical**. Was the Project Description section of the report organized effectively with a Statement of Problem, appropriate background information, clear description of the alternatives evaluated, etc? Was a continuous, logical sequence of steps taken to solve the design problem? Was the recommended solution feasible and appropriate to address the problem statement? Was a creativity and innovative approach used? Was knowledge of subject matter demonstrated? Was the design solution analyzed for economic feasibility; was this analysis presented? Were works cited and credit to

resources and assistance correctly presented? Was the complete analysis and design solution presented clearly within the 20-page Project Description?

b. **Presentation**. Were visual aids (graphs, supporting info, pictures, etc.), presented clearly? Were correct grammar, correct spelling, and appropriate technical writing methods used? Was the formatting and organization of the report presented in a logical manner?

2. ORAL PRESENTATION:

a. **Content**. Was subject technical or general in nature? Was technical subject matter relevant to design? To what extent was subject of interest to a technical audience? Was knowledge of subject and presentation content exhibited by team members? Was the work presented independent and original? Was credit given for source of material or contribution by others? Was there any novel approach to the solution?

b. **Organization**. Was there sufficient background information provided in order to introduce the audience to the subject? Were facts developed in logical and continuous sequence? Was there a definite conclusion and was it adequately based on the facts or data presented?

c. **Delivery and Effectiveness**. Was appropriate volume used to reach all audience members? Did team members use proper English? Was the vocabulary used sufficient? Were the words distinctly pronounced? Was personal appearance appropriate? Were there any distracting mannerisms? Was the manner of delivery (conversation, memorized, read from manuscript) satisfactory? If visual aids were used, how effectively were they used?

d. **Discussion**. Did the presentation evoke spontaneous questions from the panel? Did questions indicate the need for clarification of facts presented or were they merely of the type seeking additional information? How readily and with what self-assurance did the speakers answer questions? Did the answers indicate knowledge of subject beyond that disclosed in the original presentation?

The judges will have the opportunity to comment on the design reports and presentations during the judging process. Judging comments for each submittal will be made available to the corresponding team after the competition at the request of the team. Teams will not be allowed to view the scoring of any other team within the competition.

PENALTIES

Failure to comply with the above requirements may result in penalties to a team's final score. The maximum penalties a team can incur are five points. Teams will be notified of the penalties they have received prior to the competition at WEFTEC. Penalties are at the discretion of the Subcommittee but may include the following:

- Failure to submit an abstract within the guidelines set forth herein – 1 point;
- Failure to submit an electronic copy of the design report within the guidelines set forth herein – 1 point;
- Failure to submit a hard copy of the design report within the guidelines set forth herein – 1 point;

- Failure to submit the PowerPoint presentation within the guidelines set forth herein – 1 point;
- Failure to submit entries on-time – 1 point per day, up to a maximum of 3 points for late entries; and
- Failure to remain on site for team photos with WEF Leadership – 1 point.

AWARDS

Winning teams will be announced immediately after the completion of both competitions. Prizes for the winner(s) at WEFTEC will vary depending on sponsorship opportunities and are subject to change at the discretion of the Subcommittee. Each participating team will receive certificates of participation. Winning teams may also receive a recognition plaque. Suggested monetary awards for the top four teams are: 1st place: $2,500, 2nd place: $1,500, 3rd place: $1,000, and 4th place: $750. Monetary awards are at the discretion of the Subcommittee.

Plaques and prizes will be distributed from WEF to the winning team's Member Association (MA) after WEFTEC. Efforts may be made to deliver the plaques to the winning team's advisor based on the contact information provided on the Entry Form. The amount of monetary award and manner of delivery to the winning team by the MA is at the MA's discretion. The representative teams are responsible for understanding their MA's policies prior to the team's participation at WEFTEC.

Monetary prizes are intended to be awarded to offset student travel to WEFTEC and to support the student chapter at the winning school. Every opportunity should be made by the MA to assist the student team in competing at WEFTEC, and serious consideration should be made for awarding money toward travel expenses to attend WEFTEC. Similarly, each MA might seek out sponsorships from local industries, municipalities, and consulting firms in order to help the winner attend WEFTEC.

INCREASING THE VALUE OF COMPETITION ATTENDANCE

Teams are encouraged to check the WEFTEC schedule for additional opportunities for technology transfer (technical sessions, workshops, exhibit tours), networking (career fair, student social events, university lounge), and volunteering (service project, committee meetings) and to make necessary travel arrangements to take full advantage of the WEFTEC attendance experience for students as well as for young professionals.

QUESTIONS OR COMMENTS

Please review the entire package and contact the WEF® Student Design Competition Subcommittee for any clarification on any of the requirements or guidelines of the competition.

SAMPLE PROJECT

Below is a sample information packet *that would be given to each student team wishing to compete at the MA level. This was an actual problem description and packet given to a student team competing at the MA level. Note this is only given as a general idea of sample project description and information. This packet would vary with the amount of information provided and contact names. A copy of the Student Design Competition Guidelines should also be included.*

DESCRIPTION OF PROJECT

This year's design project is a three-part project and includes the preliminary design of a sewer collection system, a wastewater treatment plant expansion, and a reuse irrigation distribution system for a large development in Jupiter, FL known as Abacoa. A contact at the WWTP should be provided if possible so that teams may arrange tours of the plant as part of the project.

Part 1 – Sewer Collection
Based on Abacoa's community master plan, design the back-bone sewer infrastructure that will collect sewage from the community and transport the sewage to the treatment plant location.

Part 2 – Sewage Treatment
As a result of the growing community, the Loxahatchee River District's (LRD) Regional Wastewater Treatment Plant (WWTP) will need to be expanded. With reuse being a favorable method of effluent disposal, LRD desires the expansion to contain nitrogen reduction processes that would drive the nitrogen under the existing ground water standards of 10 ppm.

Part 3 – Reuse Irrigation
Based on the community's irrigation needs, design a reuse irrigation system and backbone distribution system that will provide irrigation-quality water from the WWTP to the development.

The following documents are attached to assist in the preparation of the recommended program developed by the student chapters:

Exhibit A - Development master plan of Abacoa
Exhibit B - Map of Jupiter
Exhibit C - Loxahatchee River District Wastewater Treatment Plant Drawings
Exhibit D - WWTP Monthly Operating Report (MOR)
Exhibit E - WWTP Capacity Analysis Report
Exhibit F - Abacoa Irrigation Master Plan
Exhibit G - Scoring Sheet for Student Design Competition
Exhibit H - Entry Form

ATTACHMENT A

TEAM ENTRY FORM

TEAM ENTRY FORM
WEFTEC 2019 STUDENT DESIGN COMPETITION

SUBMIT ENTRY FORM BY June 3, 2019

Please note *- Names provided below will be printed in competition brochures, on participation certificates, and on plaques for the winning teams, as shown. Please make sure all names are included and written correctly.*

Project Title: _____

☐ Wastewater Design Competition ☐ Water Environment Design Competition

Name of University: _____
Address: _____
City: _____ State:_____ Zip:_____

Faculty Advisor:
Full Name and Credentials (PE/PhD/etc): _____
Phone: _____ Email: _____

Team Leader / Responsible Contact Individual:
Name: _____ Level in School: _____
Phone: _____ Email: _____

Name(s) of Additional Team Members: *(use additional paper if necessary)*
Name: _____ Level in School: _____
Email: _____
Name: _____ Level in School: _____
Email: _____
Name: _____ Level in School: _____
Email: _____
Name: _____ Level in School: _____
Email: _____
Name: _____ Level in School: _____
Email: _____

Team's Member Association Contact: *(MA Competition Chair, MA Student Activities Chair, other)*
Name: _____ Position:_____
Phone: _____ Email: _____

WEF® COMPETITION TIMELINE:

DATE	ACTION ITEM	CONTACT PERSON
May 3, 2019	Notify Subcommittee Chair of intent to compete.	**WEF® SYPC Student Design Competition Subcommittee Chair:** Brown and Caldwell ATTN : Pono Hanson 1725 Duke Street, Suite 250 Alexandria, VA 22314 Phone: (703) 340-1081 Email: PHanson@BrwnCald.com
June 3, 2019	Submit completed Entry Form (A) and completed project Abstract Form (B) electronically to Chair.	
Week of June 17, 2019	Participate in informational webinar hosted by the Subcommittee. One member from each team is required to participate.	
August 23, 2019	Submit one hard copy and one electronic copy of the design report, postmarked no later this date addressed to the Contact Person shown to the right.	
September 15, 2019	Submit a copy of the PowerPoint presentation, uploads shall be completed no later than this date.	
September 22, 2019	WEFTEC® STUDENT DESIGN COMPETITION	

ATTACHMENT B

PROJECT ABSTRACT FORM

PROJECT ABSTRACT FORM
WEFTEC® 2019 STUDENT DESIGN COMPETITION

SUBMIT ABSTRACT FORM BY June 3, 2019

Project Title: _____

University: _____

Faculty Advisor: _____

Team Members: _____

_____

Abstract (not to exceed 200 words) – failure to comply to fully detail project description can result in rejection of abstract:

ATTACHMENT C

EXAMPLE SCORING SHEETS

EXAMPLE SCORING TALLY SHEET
2019 STUDENT DESIGN COMPETITION

Team:			
Title:			
	Report Score	**Presentation Score**	**Total**
Judge #1			
Judge #2			
Judge #3			
Judge #4			
Average Score			
Penalties (to be assessed by Subcommittee)			
FINAL SCORE (Sum of Average Scores minus Penalties)			

EXAMPLE SCORING SHEET
2019 STUDENT DESIGN COMPETITION
DESIGN REPORT

Name of University: _____

Project Title: _____

Judge: _____

Technical - 70 pts

1. Appropriate introduction, statement of problem, background information provided? (5 pts).. _____
2. Continuous, logical sequence of steps to solution presented? (10 pts) ..... _____
3. Was conclusion (design solution) based on logical steps presented? (10 pts) ..... _____
4. Was design solution feasible and appropriate to address problem statement? (15 pts)..... _____
5. Were creativity and innovative approaches applied? (5 pts) ..... _____
6. Was knowledge of subject matter demonstrated? (10 pts)..... _____
7. Were appropriate economic and feasibility analyses presented? (10 pts) ..... _____
8. Were appropriate citations use to credit to resources? (5 pts) ..... _____

TOTAL (70 pts) ..... _____

Report Presentation - 30 pts

1. Were visual aids (graphs, supporting info, pictures, etc.) presented clearly? (10 pts) ..... _____
2. Were correct grammar, correct spelling, and technical writing methods used? (10 pts)..... _____
3. Was formatting and organization of report presented in a logical manner? (10 pts)..... _____

TOTAL (30 pts) ..... _____

GRAND TOTAL (100 pts) ..... _____

COMMENTS:

_____

_____

EXAMPLE SCORING SHEET
2019 STUDENT DESIGN COMPETITION
PRESENTATION

Name of University: _____

Project Title: _____

Judge: _____

Content - 45 pts

1. Presentation included sufficient depth of technical information (15 pts)..... _____
2. Technical information presented was relevant to design (10 pts) ..... _____
3. Team displayed adequate knowledge of subject and presentation content (15 pts)..... _____
4. Recommended design solution was original and innovative (5 pts)..... _____

TOTAL (45 pts) ..... _____

Organization - 20 pts

1. Sufficient background information was provided (5 pts) ..... _____
2. Essential facts were developed in a logical and continuous sequence (10 pts)..... _____
3. Recommended design solution was based on facts and data presented (5 pts) ..... _____

TOTAL (20 pts) ..... _____

Delivery & Effectiveness - 25 pts

1. Presentation and visual aides were clear, legible, and effective (10 pts)..... _____
2. Vocal delivery was appropriate (not memorized nor read directly; proper volume, distinct pronunciation, and appropriate vocabulary used) (10 pts) ..... _____
3. Eye contact was made with judges and audience, no distracting mannerisms (5 pts) ..... _____

TOTAL (25 pts) ..... _____

Discussion - 10 pts

1. Answers to questions posed by judges were clear and technically correct (5 pts)..... _____
2. Answers indicated knowledge of subject beyond presented material (5 pts)..... _____

TOTAL (10 pts) ..... _____

GRAND TOTAL (100 pts) ..... _____

COMMENTS:

_____

_____