

***The Sixteenth  
Annual***

**North  
American  
Computational  
Linguistics  
Open  
Competition**

**2022**

**[www.nacloweb.org](http://www.nacloweb.org)**

# **2022 Coordinator Handbook**

**October 7, 2021**

**Please check the website for updates and announcements**

**2022 Contest Dates (USA and Anglophone Canada)\***

Open Round: January 27, 2022 / Invitational Round: March 17, 2022

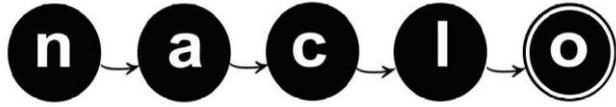
Site registration deadline: January 15, 2022

Student registration deadline: January 24, 2022

Contact [nacloinquiries@googlegroups.com](mailto:nacloinquiries@googlegroups.com) if you miss the deadline.

Walk-ins allowed with advance permission of the local site host.

\* The dates for the 2022 Francophone contest in Canada will be announced later. Check the [OLCF](http://OLCF) site.



## **ABOUT**

### **Introduction**

NACLO is a fun (and educational!) contest for U.S. and Canadian high school students in which contestants compete by solving compelling and creative puzzles in linguistics and computational linguistics. Requiring no previous knowledge of linguistics, languages, or computing, these puzzles can be solved by analytic reasoning alone, and serve as a fun introduction to a field to which many high school students have never been introduced. Winners of NACLO are eligible to compete in the International Linguistics Olympiad, one of twelve international high school science Olympiads.

### **Contact**

This handbook provides answers to most questions related to NACLO. However, if you have any additional questions, you may reach the NACLO Organizing Committee by sending an email to [nacloinquiries@googlegroups.com](mailto:nacloinquiries@googlegroups.com).

### **Contest in Canada**

Canada is represented by two teams at the IOL: An Anglophone team which is selected through NACLO, and a Francophone team which is selected through the Canadian Francophone Linguistic Olympiad (OLCF). Information about the OLCF can be found [here](#).

### **Contest Overview**

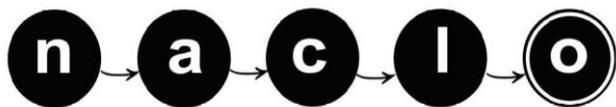
#### **Open Round**

The open round is open to all interested middle school and high school students; its purpose is to introduce students to the disciplines of linguistics and computational linguistics, as well as to identify the contestants who will advance to the Invitational Round.

#### **Invitational Round**

The purpose of this round is to select national winners, who will be eligible to participate in the international competition, the International Linguistics Olympiad (IOL) if they meet IOL eligibility requirements (see relevant section below). Therefore, the problems in this round are harder than the Open Round problems.

#### **Contest length**



The Open Round will be three hours long; however, note that the judges have the authority to lengthen it in the event of unforeseen circumstances. The start time of the Open Round depends on the time zone. Time zones not listed below should make special arrangements with the organizers in advance. Due to limited jury availability, we do not have much flexibility on these start times: students who have a direct conflict with the time the contest is running (e.g., a Californian student with an exam from 10 am to noon) will not be able to participate in the contest.

<i>Time for the <b>Open Round</b></i>	<i>Start</i>	<i>End</i>
Pacific	9:00am	12:00noon
Mountain	10:00am	1:00pm
Central	9:00am	12:00noon
Eastern	10:00am	1:00pm
Atlantic	11:00am	2:00pm

The start times shown here are when students can work on the problems. Registration and other administrative activities should be completed earlier. Hosts and participants should arrive at the site 30-45 minutes prior to the designated start time to set up for the contest.

The Invitational Round will be four hours long. The contest will start at 9 AM in all time zones except the Atlantic Time Zone.

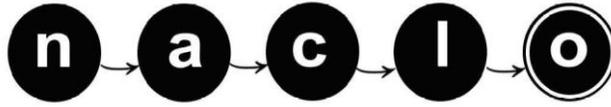
<i>Time for the <b>Invitational Round</b></i>	<i>Start</i>	<i>End</i>
Pacific	9:00am	1:00pm
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Atlantic	10:00am	2:00pm

## **HOW TO BECOME A HOST**

### **University sites**

The list of available locations as of publication of this document is on Page 6, and an up-to-date list is available at [https://www.nacloweb.org/university\\_sites.php](https://www.nacloweb.org/university_sites.php).

Each university site is responsible for responding to emails with announcements from the NACLO organizers and contacting registered students with directions and other important information about the day of the contest. We **strongly** suggest creating a webpage with information about your site (location, site-specific procedures, student arrival times, etc.).



NACLO is a great opportunity to reach out to students who are interested in studying linguistics or computer science. You may provide information on careers in linguistics and language technologies and how to study linguistics and language technologies in college. You can also recruit students to enroll in your program.

## High School sites

Students who cannot or choose not to participate at a university site can participate at their own school. **Students may not participate at a high school in which they are not enrolled. Students whose high schools are not NACLO hosts can reach out to a faculty member at their school who can in turn create a High School site for the NACLO contest.** In order to participate at school, students should ensure that a teacher at their school will serve as a site facilitator, is aware of the rules of the contest and will supervise them on contest day.

If your high school is already listed on the NACLO website, the NACLO organizing committee will confirm with the previous host that you will be hosting again this year. If it is not listed, you can register your high school on the NACLO website [here](#). Then, register yourself as a high school host [here](#). Then, interested students can register to participate in NACLO at your site [here](#).

Note regarding COVID-19 Contingency plans: **If a high school is engaged in remote learning, they will be asked to serve as proctors for NACLO in a virtual environment similar to that being used at the schools for other examinations. NACLO will not be offering an at-home participation option in 2022.**

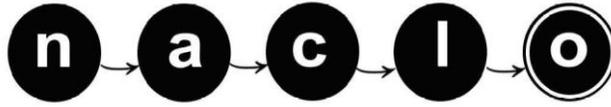
## Home School Sites

If your student is home schooled (according to the official rules of your state or province), you can still register for NACLO. Parents should go to the NACLO website teacher registration page (the main NACLO website under “High School Site Coordination”) and register themselves as a teacher. Once you get to the “school” option you can select “home school” from the drop down menu. Once you have registered as a teacher you will be able to register your student on the student registration page (The main NACLO website under “Student Registration”).

## Clarifications regarding competing at a high school site

If you are unable to host the competition, your students can still participate at a nearby university site. In this case, however, do not register as a site host. Instead, the coordinator at the university site your students will be attending will carry site host responsibilities.

**If your student wishes to sign up for another high school site, they must contact the host for that site prior to registration.** Many high school site hosts are teachers who only have enough space for or permission to host only their own students, so **be prepared with the knowledge that this may not be an option. Note: In 2022, all high school hosts are limiting participation to their own students due to COVID-19 restrictions.**



## Student Eligibility

*To participate in NACLO, students must satisfy all of the following criteria:*

- They have never been enrolled as a full-time college or university student.
- They will be younger than 20 years old on the first day of the IOL, whose dates are at <https://ioling.org/upcoming/>.
- They are a citizen of the US or Canada or a student in a secondary school in the US or Canada.
- They are available to participate in the contest at one of the times it's offered.
- They can either participate in the contest at a registered university site or find a teacher or librarian who can run a high school site as specified elsewhere.

*To be eligible for the Anglophone Canadian IOL team, students must:*

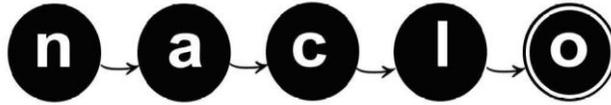
- Be eligible for and participate in NACLO.
- Be a citizen of Canada or a student in a Canadian secondary school, and provide proof if asked.
- Meet all IOL eligibility rules: <https://ioling.org/rules/rules.pdf>.

*To be eligible for the US IOL team, students must:*

- Be eligible for and participate in NACLO.
- Be a citizen of the US or a student in a US secondary school, and provide proof if asked.
- Meet all IOL eligibility rules: <https://ioling.org/rules/rules.pdf>.

**Important:** In a given year, a student may only attempt to qualify for one national IOL team, per IOL Regulations. A student may participate in more than one IOL-qualifying contest, but must declare before each one which national team they intend to qualify for. **Therefore**, if a student is participating in NACLO and an IOL-qualifying contest in any other country (e.g., UKLO in the United Kingdom, OBL in Brazil, etc.) in the current year, they must declare this by emailing [nacloinquiries@googlegroups.com](mailto:nacloinquiries@googlegroups.com) prior to the NACLO Open Round (January 27, 2022). If no email is received before this date, the student will by default be considered ineligible for both the Anglophone Canadian and US IOL teams.

**Important:** In the case of a multinational contest, like NACLO, all students must be considered as attempting to qualify for only one national IOL team, and must indicate which beforehand, per IOL Regulations. **Therefore**, if a student is eligible for both the Anglophone Canadian and US IOL teams, according to the criteria above, they must choose one team that they wish to be considered for. The student will be considered ineligible for the team they do not choose. To declare their choice, the student must email [nacloinquiries@googlegroups.com](mailto:nacloinquiries@googlegroups.com) prior to the NACLO Open Round (January 27, 2022). If no email is received before this date, the student will be considered by default to have chosen the country which they selected during registration.



## University Locations

The following universities are currently expected to host NACLO sites in 2022. Additional locations and possible cancellations will be posted on the [website](#). Sites that have a strikethrough are not currently expected to be open in 2022 due to COVID-19 restrictions on their campuses.

Please update your site's website to reflect whether you are hosting NACLO 2022 or not.

### Canada

#### AB

~~University of Alberta (Edmonton)~~  
~~University of Calgary (Calgary)~~

#### BC

~~Simon Fraser University (Burnaby)~~  
University of British Columbia (Vancouver)

#### NS

~~Dalhousie University (Halifax)~~

#### ON

University of Ottawa (Ottawa)

### United States

#### CA

~~California State University (Long Beach)~~  
California State University (Dominguez Hills)  
~~SpringLight Education Institute (San Jose)~~  
~~San Diego State University (San Diego)~~  
~~Stanford University (Stanford)~~  
University of California, Irvine (Irvine)  
~~University of California, Los Angeles (LA)~~  
University of California, San Diego  
University of Southern California, ISI  
Campus (Marina del Rey)

#### CO

~~University of Colorado (Boulder)~~

#### CT

Yale University (New Haven)

University of Toronto (Toronto)  
~~University of Western Ontario (London)~~

#### QC

McGill University (Montreal)

#### SK

University of Saskatchewan

#### DC

Georgetown University (Washington, DC)

#### DE

~~University of Delaware (Newark)~~

#### FL

~~Keiser University (Jacksonville)~~

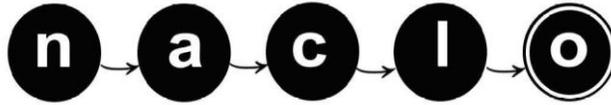
#### GA

~~Emory University (Atlanta)~~  
Georgia Tech

#### IL

~~Northeastern Illinois University (Chicago)~~  
~~Northwestern University Chicago (Evanston)~~  
~~Southern Illinois University (Carbondale)~~  
University of Illinois at Urbana-Champaign  
(Urbana-Champaign)

#### IN



Indiana University (Bloomington)  
University of Notre Dame (South Bend)

~~KY~~

~~University of Kentucky (Lexington)~~

~~MA~~

~~Brandeis University (Waltham)~~  
~~Massachusetts Institute of Technology (Cambridge)~~  
~~University of Massachusetts, Lowell (Lowell)~~

~~MD~~

~~Johns Hopkins University (Baltimore)~~  
~~University of Maryland (College Park)~~

~~ME~~

~~University of Southern Maine~~

~~MI~~

~~University of Michigan (Ann Arbor)~~

~~MN~~

~~Minnesota State University, Mankato (Mankato)~~

~~NC~~

~~University of North Carolina, Charlotte (Charlotte)~~

~~NE~~

~~University of Nebraska, Omaha (Omaha)~~

~~NJ~~

~~Montclair State University (Montclair)~~  
~~Princeton University (Princeton)~~

~~NY~~

~~Columbia University (New York)~~  
~~Cornell University (Ithaca)~~  
~~Stony Brook University (Stony Brook)~~  
~~Union College (Schenectady)~~  
~~Long Island University Post (Brookville)~~

University at Buffalo (Buffalo)

~~OH~~

~~Ohio State University (Columbus)~~

~~OR~~

~~Oregon Mathletics (Beaverton)~~  
~~Oregon State University (Corvallis)~~

~~PA~~

~~Carnegie Mellon University (Pittsburgh)~~  
~~University of Pennsylvania (Philadelphia)~~

~~TN~~

~~Middle Tennessee State University (Murfreesboro)~~  
~~University of Memphis (Memphis)~~

~~TX~~

~~Austin Math Circle (Austin)~~  
~~University of Houston (Houston)~~  
~~University of North Texas (Denton)~~  
~~University of Texas at Dallas (Richardson)~~  
~~University of Texas, Austin (Austin)~~  
~~University of Texas at San Antonio (San Antonio)~~

~~UT~~

~~Brigham Young University (Provo)~~  
~~University of Utah (Salt Lake City)~~

~~VA~~

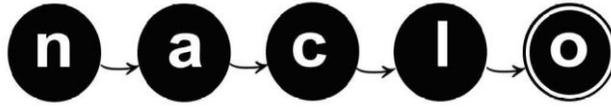
~~William and Mary~~

~~WA~~

~~University of Washington (Seattle)~~  
~~Western Washington University (Bellingham)~~

~~WI~~

~~University of Wisconsin, Milwaukee (Milwaukee)~~



## High School Locations

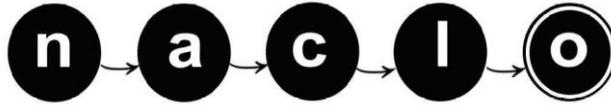
For a list of high school site locations, visit the webpage [here](#).

## HOST RESPONSIBILITIES

This is the list of responsibilities for university and high school hosts.

### As soon as possible

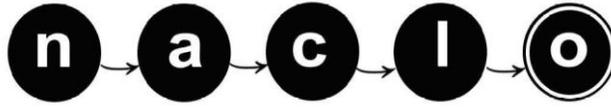
- **Read this booklet** and familiarize yourself with the contest. NACLO has been active for fourteen years and the rules have evolved. The [website](#) also has all the relevant information about the contest, including many [resources](#) and [sample problems](#).
- **Reserve a contest room.** The contest room should be large enough so that the number of students who have registered (plus any more walk-ins/late registrants you are willing to take) will each have a desk/writing surface and can spread out so they cannot see each other's papers. The room must also have an internet connection so you can communicate with the jury during the competition. You should reserve the contest room starting at least 1 hour before the contest start time. This will allow you time to welcome the students, thank the sponsors and local volunteers, read the rules, etc. as well as distribute the contest booklets. The students should start working on the problem set at the designated time and have exactly three hours (in round one) to actually work on the booklets. This means you need to finish with all preparations, reading the rules, etc. before the contest start time.
- **Promote the competition.** Circulate email announcements, flyers and practice problems to students at your school or near your university. Promotional materials can be found at <https://www.nacloweb.org/resources.php>. Please share with us any inventive ways of outreach that you come up with. Tell interested students to register online.
- (optional) Arrange for a training/information session. These are encouraged, but are not required for participation in NACLO and not all participating sites provide them. The training sessions may include problem solving practice, an overview of linguistics and computational linguistics, and ideas about careers in linguistics and computational linguistics; they typically last from one to two hours. The NACLO web site has instructions for running such sessions under the "Resources" tab.
- (optional) Schedule additional facilitators if needed. Use your judgment regarding how many facilitators you will need. There must be at least one person in the room with the participants at all times to take questions and make sure that all participants follow the rules.



- (university sites only) Send an email to [naclo22org@googlegroups.com](mailto:naclo22org@googlegroups.com) once you have set up a local webpage with information for contestants (e.g., building and room number, driving directions, schedule, etc.). We will then link your page on the NACLO [website](#).
- **Monitor the registration page for your site** at [www.nacloweb.org](http://www.nacloweb.org) to keep track of the number of students registered for your site. In the past, we have had anywhere from 1 to 250 students with a mean of 15 students per site (1,500 students at 100+ sites). You should set a limit for your site based on the size of the room and number of facilitators.
- **Send reminders to registered students about the contest.** Plan for two emails: two weeks before the competition and one week before the competition. The first one can be a reminder of the dates and times. The second one should include directions to your location, a schedule for the day including transportation information, and a list of rules.
- (optional) Plan to print a NACLO poster listing the sponsors. We will send you a poster by email. If you don't have a large poster printer, we will mail it to you on paper. [Contact us](#) ASAP if you would like us to send you one.
- (university sites only, optional) Do you have any souvenirs for the students? T-shirts, keychains, pens, etc. We do not have funding to help out with these, but see if you can get something from your department, school, university, or from local businesses.
- (optional) Do you want to give the students any food before or after the competition (not during)? Again, we do not have funding to help out with this, but if you can get someone to donate some food, go ahead. **Note: in 2022**, we are not encouraging giving out food during the competition due to COVID-19 precautions.
- (optional) Do you want to give out college or career information? This is often done during the registration/check-in hour, because students may need to leave immediately after the competition. The LSA (Linguistics Society of America) has several brochures on their [website](#). You can also give out information on majoring in linguistics/language technologies at your university or have brochures/representatives from language technologies companies.

### Two days before the contest

- First and foremost, you will need to certify your site. In order to do so, you will need to:
  - o [Go to your Site Coordination page \(different for universities and high schools\) on the NACLO website](#).
  - o [University sites](#): Select your site, and log in with your password.  
[High school sites](#): Log in with your username and password.



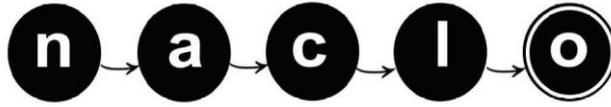
- If you do not know your password, please email [nacloinquiries@googlegroups.com](mailto:nacloinquiries@googlegroups.com) before the day of the contest.
- Click on “Edit Self” and complete the certification checklist. Make sure you’ve done all 10 items on the checklist, and click the “Update checklist (certify)” button when complete.
- Sites that don't certify (and thereby indicate that they are familiar with the rules, etc.) will not be allowed to participate. If you have any questions or are having a problem certifying your site, or if you do not know your password, please email [nacloinquiries@googlegroups.com](mailto:nacloinquiries@googlegroups.com).
- Note that you should not register as a site host if you are dropping your students off at a testing site.

### The day before the contest

- Obtain the booklets from the jury (they will email you the problem booklet in PDF format) and print one copy (at 3600 dpi, if possible). Make sure that all diagrams and fonts print properly. If everything looks normal, print booklets **single-sided** as the students will be required to write their answers on the answer sheets and you will need to scan those and submit them to the jury. Make sure to print enough copies for all participants, and print extras if you plan to accept walk-ins. It is ok to print multiple copies of the blank page that appears near the end of the booklet and use it as an extra page for students who request it.
- You will receive an email that will ask you to confirm that you are ready for the contest. Please reply to it ASAP. You will be asked if your site will allow walk-ins on the day of the contest.
- You will also receive an email with a link to the website where you will be communicating with the jury during the contest. We use Piazza for this purpose. Please log in to the site to ensure you are able to access the forum. It will be important to keep this site open and monitor it throughout the contest as the jury will post announcements and clarifications which will need to be shared with the contestants.
- Make sure that no student has access to the booklets before the contest starts. Make sure that they are informed not to discuss the problems *even after the contest is over* (to prevent cross time zone cheating). We will post the problem booklets on the web site by the end of April.

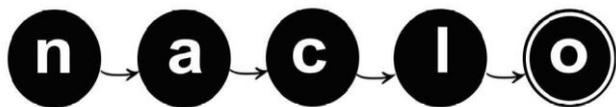
### The day of the contest and beyond

- (optional) Set up a registration table 30-45 minutes before start time. You may get some walk-in students who haven't preregistered. If this happens, let them use your computer to [register on the NACLO site](#) before the actual contest starts and get a registration number. If that is not



possible, let them register as soon as the contest is over. Each participant needs to get a registration number.

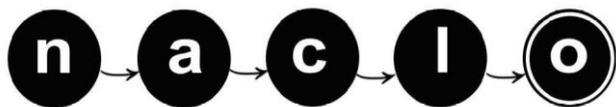
- When students arrive, ask them to complete the registration page completely including the “Site ID” part. Your site ID is available on the NACLO website on your Site Coordination page. If you are still unable to find your ID, please use the site name.
- Log in to the Piazza site at least 15 minutes prior to the start of the contest. You must keep this site open throughout the contest.
- When the contest starts, post a private message in Piazza with the exact starting time on the day of the contest so that we can keep track. For example, “Kevin Smith - PS 45, Milwaukee, WI - start time 09:04, end time 12:04 - participating: 5 students”.
- It is absolutely crucial that you keep track of which registered students did and did not show up for the contest on your NACLO page. In order to do this, you will need to:
  - o Go to your Site Coordination page (different for universities and high schools) on the NACLO website).
  - o University sites: Select your site, and log in with your password.  
High school sites: Log in with your username and password.
  - o Click the "Test Day Checkoff" button.
  - o Check the corresponding box for each student who shows up to the contest.
  - o Also, make sure to enter the exact time your contest started in the box at the top of the page.
- When students raise their hands for questions, go over to them in order to make sure that they don't blurt out a clue or an answer. Tell the student that you will convey the question to the jury. **Do not answer the question** even if you think it is simple or obvious.
- All questions from the participants should be posted on the NACLO 2022 Piazza site. Please post your question as a private question just to the jury. The jury will be periodically updating a web page with all active clarifications that need to be conveyed to all participants. If resources are available at your site, you may wish to project this web page for all participants to view, or write these clarifications on the board.
- Continuously monitor the Piazza site for possible announcements and clarifications by the judges. Make sure that you convey all jury clarifications to all contestants in a timely manner.
- Ask the students to complete a short online student evaluation form. Each student will be emailed a link to the evaluation once the contest has ended.



- Fill out the short online facilitator evaluation form.
- Collect the booklets from your students. Students are **not allowed to take copies of the booklets with them**; this rule is essential for preventing possible cross time zone cheating. The booklets will be posted on the NACLO site by the end of April.
- While collecting the booklets, please ensure that all contestants have written their names and registration numbers **on each Answer Sheet**.
- Please begin by scanning all Answer Sheets (only cover page with identification information and answer pages) and converting them to PDF format. Name each booklet with the student's ID number (e.g. '557.pdf').
- Please do not scan each page of a student's booklet as an individual PDF, and please do not send multiple students' booklets in the same PDF. It is very crucial to name each file properly. The jury reserves the right not to grade any submissions that are not properly named. Note that scans must be legible and complete. That is, **all answer pages must be submitted**, even if blank or incomplete.
- Once you have scanned all the booklets, the procedure for the Open and Invitational Rounds differs. **For the Open Round:** upload each student's submission to the NACLO website in the Site Coordinator portal – you will see an “Upload” button next to each student's name on the list of registrants. Once you have done this, your responsibilities for the Open Round are over; however, please keep the booklets until results become available in case an error should arise (e.g. a page's scanning is faulty and the jury asks you to scan it again).
- **For the Invitational Round:** Unlike the Open Round, answer sheets should be submitted by email to [naclo22jury@googlegroups.com](mailto:naclo22jury@googlegroups.com).
- Note that scans must be legible and complete. That is, **all answer pages must be submitted, even if blank or incomplete**.
- For both rounds, once you have scanned and uploaded/mailed the booklets, your responsibilities are done! As you wait for the results, keep in mind that it may take 4-6 weeks for these to become available.
- (optional) You may follow up with the students about their results, e.g., for college admissions guidance, etc.

## **OTHER CONTEST RULES**

Students should submit all their solutions in writing, using a *black pen*, only in the space provided and ensure that their handwriting is legible. The use of a black pen is essential to ensure legible photocopying or scanning of the solutions, which may be done to streamline the grading process.



Students are allowed to use extra blank paper; however, there should never be answers to more than one question on a single sheet of paper. Extra paper should be scanned together with the booklet. The answers will be split by problem number and shipped to graders around the world. Students should write only on one side of the papers so that these pages can be scanned if needed. Furthermore, students may not take any booklets or scratch paper with them when they leave the site.

Students may solve the given problems in any order, and should try to solve as many problems as possible. Students are not penalized for incorrect answers. Some problems (mostly on the Invitational round) **may** include "practice" (explanations) and "theory" questions; the practice sections are worth approximately 60% of the score, and the theory sections are worth approximately 40%. Students may receive partial credit for providing an incomplete solution to a problem, and/or partial credit for specific ideas for solving it. Thus, if they have ideas for solving a problem, they should write them even if they have not been able to develop a complete solution. In other words, students should be encouraged to show their work and/or thought process when solving these problems.

Given the large number of expected participants in the first round, most or all of the problems in that round will not require a "theory" part. Instead, the answers will be automatically gradeable. "Blue," "17", "1A, 2D, 3D, 4E, 5C", "nihuetzi," and "A>C>G>F>B>E>D" are fine answers. The problem booklets will be designed to include an answer sheet.

### **Allowed and disallowed materials**

Students should bring their own pens and pencils. Students are **not** allowed to bring their own paper. The facilitators will provide all paper needed.

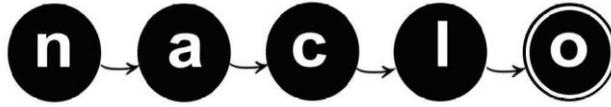
Participants must write their solutions in black ink, and may use pencils only for scratch work. They may use blank paper for scratch work; however, they should copy their final solutions into the spaces provided in the problem booklet, and they may enclose additional sheets only if the space in the booklet is insufficient. Scratch paper is to be handed in with the answer booklet, but kept separate from it.

Students may not use any electronic devices except basic wristwatches. In particular, they may not use calculators, computers, tablets, cell phones, pagers, or wristwatches with built-in calculators. Attempts to use electronic devices will normally lead to disqualification. If a student has any medical electronic devices, required for health reasons, he or she should let the facilitators know before the contest.

Participants may not use any written or printed materials such as books or their own notes produced before the contest.

### **Conduct during the contest**

Students should follow all instructions of the facilitators; if they have questions about the rules or acceptable conduct during the contest, they should raise their hand and ask a facilitator.



Students may not talk with anyone except facilitators, and may not collaborate with other contestants. Attempts to communicate with other contestants will normally lead to disqualification.

Bags should be placed under the seats before the contest, and may not be used during the contest. If students have brought snacks, these should be placed on the desk before the contest begins.

If a student has a cell phone, pager, or any other sound-emitting device in his or her bag, he or she should turn it off before the contest. Just switching it to vibrate or silent mode is not sufficient.

Participants may take bathroom breaks during the contest; however, they may not take their bags, any electronic devices, problem booklets, or their notes with them when temporarily leaving the room. Also, two contestants may not take a bathroom break at the same time.

Unless the local facilitator overrides this rule (e.g., due to university or high school regulations or COVID-19 precautions), students may bring a snack into the contest site and eat during the contest, but they should be considerate of others. In particular, they should avoid "noisy" foods, such as foil-wrapped chocolates, and foods with a strong odor. The facilitators have the authority to remove any types of food from the contest site if they feel that these types of food may distract other contestants. Noisy wrappers should be opened before the contest begins.

If students arrive late, they may still participate in the contest; however they may not ask facilitators to repeat any instructions or announcements that have been missed. Also, they may not ask for time extensions in the end of the contest, which means that they will have less time than the other contestants.

### **Questions during the contest**

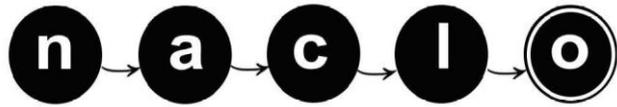
If a student has a question, he or she needs to raise a hand, and one of the facilitators will talk with him/her. When talking with a facilitator, students should keep their voices low, to make sure that they do not distract other contestants and do not accidentally provide a hint for solving the problem.

If a student needs a clarification for a specific problem, the facilitator will need to contact the judges via email, which means that an immediate answer may not be available. Please note that local facilitators are unable to answer student questions without contacting the judges. If the judges agree that the problem requires a clarification or correction, they will normally announce it to all site facilitators via email.

If the judges feel that an answer is already contained in the booklet, or that attempting to give a student an answer may give someone an unwanted hint, they may refuse to answer the question by telling the student that they are unable to answer the question.

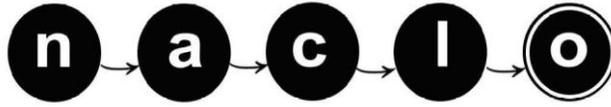
### **Scoring**

Every problem will be worth a specified number of points; harder problems are generally worth more points.



The judges will score each solution based on its correctness, quality, and clarity, and determine the overall score as the sum of solution scores. The judges will complete the scoring and announce the results (ideally, within three to six weeks after the competition).

*The judges are solely responsible for scoring the solutions, ruling on unforeseen situations, and selecting the winners; their decisions are final.*



## FREQUENTLY ASKED QUESTIONS

### How does a student register for the competition?

The competition is intended for students in the 13-18 age group. If students are younger than 13, with parental permission, they can also participate. In this case, please **do not register online**. Instead, the student should ask their parents to contact [nacloinquiries@googlegroups.com](mailto:nacloinquiries@googlegroups.com) directly.

Students should register through the NACLO web site ([www.nacloweb.org](http://www.nacloweb.org)). The registration form is located by clicking on the “student” tab. In the registration form, students must choose one of three options regarding where they will be participating:

- Choose **High School Site** if they plan to participate at your high school. This involves having a teacher or administrator supervise the contest at your school. This person should carefully review the facilitator responsibilities listed in the relevant handbook. **Students should not** register for a high school they do not attend without asking that school's site host beforehand.

OR

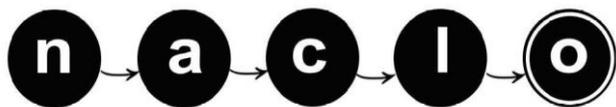
- Choose **University Site** if they plan to participate at a NACLO university site. This involves going to the university to take the test. If there is a nearby university site, we encourage students to participate at this site. An up to date list of university sites is available at on the NACLO web site. Students do not have to contact the site host prior to registering at a university site.

OR

- If your students are home schooled, they can still register! Parents should go to the NACLO website teacher registration page (the main NACLO website under “High School Site Coordination”) and register themselves as a teacher. Once you get to the “school” option you can select “home school” from the drop down menu. Once you have registered as a teacher you will be able to register your student on the student registration page (The main NACLO website under “Student Registration”).

### How long is the competition?

The Open Round will be three hours long; however, note that the judges have the authority to lengthen it in the event of unforeseen circumstances. The start time of the Open Round depends on the time zone. Time zones not listed below should make special arrangements with the organizers in advance. Due to limited jury availability, we do not have much flexibility on these start times: students who have a direct



conflict with the time the contest is running (e.g. a Californian student with an exam from 10 am to noon) will not be able to write the contest.

<i>Time for the <b>Open Round</b></i>	<i>Start</i>	<i>End</i>
Pacific	9:00am	12:00noon
Mountain	10:00am	1:00pm
Central	9:00am	12:00noon
Eastern	10:00am	1:00pm
Atlantic	11:00am	2:00pm

The start times shown here are when students can work on the problems. Registration and other administrative activities happen earlier. Students should be at the site 45 minutes prior to the designated start time.

The Invitational Round will be four hours long. The contest will start at 9 AM in all time zones except the Atlantic Time Zone.

<i>Time for the <b>Invitational Round</b></i>	<i>Start</i>	<i>End</i>
Pacific	9:00am	1:00pm
Mountain	9:00am	1:00pm
Central	9:00am	1:00pm
Eastern	9:00am	1:00pm
Atlantic	10:00am	2:00pm

### **Can younger students (e.g., middle school students) participate?**

Yes, they can. In fact, we will award a special certificate to the top students who participate in the 8<sup>th</sup> grade or below. Students younger than 13 should see our special registration instructions above.

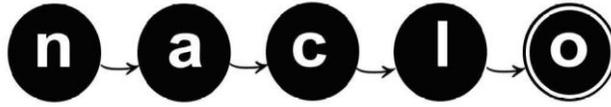
### **How many problems should participants expect?**

Participants should expect 5-8 problems during the Open Round and 6-10 (generally harder) problems in the Invitational Round.

### **What problem types should participants expect?**

Students may encounter the following problem types; however, this list is not exhaustive, and they may also get problems of other types. The problems will contain all information required for solving them, and no specialized linguistic knowledge will be needed.

- *Translation problems:* A problem includes a set of sentences in a foreign language and their translations into English, which may be in order or out of order. The task is to learn as much as



possible from these translations and then translate other given sentences to or from English. Note that the foreign language may have "tricky" structure and grammar. For example, German sentences often end in verbs. Japanese people talk differently about their family and about someone else's family. Some languages do not use articles or any equivalent of "to be." Others treat animate and inanimate objects differently. Be prepared to figure out these unfamiliar features from the text.

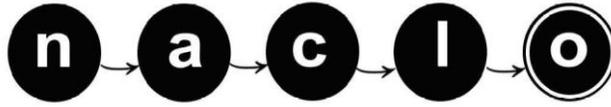
- *Number problems:* A problem includes foreign sentences that describe basic arithmetic facts, such as "six times four is twenty-four," and the task is to figure out how to translate different numbers and expressions. Some languages use bases other than ten; others use different words for the same number depending on the objects being counted, etc.
- *Writing systems:* The task is to figure out how a particular writing system works and then use it to write out a given text, such as an ancient inscription. Some languages are written right to left or top to bottom, others do not use vowels, etc.
- *Calendar systems:* The task is to figure out what calendar was used by a particular civilization based on sentences that refer to it.
- *Formal problems:* In this context, "formal" means that participants have to build a logical model of a language phenomenon. For example, a transformation rule may say "to convert an active voice sentence to passive voice, make the object of the former sentence the subject of the latter one, convert the verb to passive by using an appropriate form of the verb "to be" with the past participle of the verb, and add "by" before the word that was the subject of the former sentence." If we apply this rule to "Maya ate an apple," we get "An apple was eaten by Maya."
- *Phonological problems:* The task is to figure out the relationship between the sounds of a language and its writing system.
- *Computational problems:* The task is to develop a procedure to perform a particular linguistic task in a way that can be carried out by a computer.
- *Other types:* Deciphering kinship systems, transcribing spoken dialogue, associating sentences with images, translating unknown languages from scratch, and many other types of problems.

### **Where can I find example problems and related reading materials?**

You may find some [reading materials](#) on the NACLO website; note that these readings are not required for participation. You may also find more than 200+ past problems on the main website under "[Practice Problems](#)."

You may find even more problems by searching the web for "IOL" where "IOL" stands for "International Linguistics Olympiad."

### **What knowledge and skills do participants need?**



Participants mostly need logical thinking as well as basic general knowledge, such as arithmetic and standard calendars. Participants do not need prior knowledge of linguistics, computer science, programming, or foreign languages.

### **How many people participate in NACLO?**

Recently, 1,700+ students have been participating yearly at 100+ high school sites and about 50 university sites.

### **What happens if a participant does well?**

If a participant earns a high score at the Open Round, they will advance to the Invitational Round. They will be notified if you are invited to participate in the Invitational Round. The top scorers in the Invitational Round will be invited to an online practice program. The top-scoring four US students and the top-scoring four Canadian students in the Invitational Round will be chosen to represent the United States and Canada at the International Linguistics Olympiad. Additionally, four more top-scoring US students on an as-yet undetermined combination of the Open Round and Invitational Round may be invited as a second team to represent the United States at the International Linguistics Olympiad.

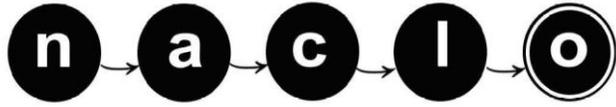
### **If participants advance to the International Linguistics Olympiad, do they have to pay for their trip?**

NACLO always tries to raise funds to cover travel expenses so that team members do not need to pay. For the past several years, the US National Science Foundation has paid all the expenses for the two US teams. We also actively engage in fundraising to cover the Anglophone Canadian team. However, we may not always succeed in our fundraising efforts. Therefore, if a student is selected for the team (US or Canada), we will inform them about the funding situation and let them know whether they will need to find additional sources of funding.

### **How well did the United States teams do at the IOL?**

In 2007, the United States participated in the International Linguistics Olympiad for the first time. The top US team tied for first place; furthermore, one of the US contestants, Adam Hesterberg, earned the highest score in the individual contest and won one of two "first diplomas." In 2008, the top US team tied for the first/second place, and the second team tied for the third/fourth place. Furthermore, US contestant Hanzhi Zhu received a gold medal. The 2009 team earned a team gold. In 2010, the team earned the most awards ever – a gold medal (Ben Sklaroff), two silvers, three bronzes in the individual contest + the team first place for the highest team score at the individual contest. In 2011, even more awards came the US team's way, including a gold medal for Morris Alper.

2012 was another very successful year with two US students (Alex Wade and Anderson Wang) getting gold medals, four others getting silver or bronze, and one of the two US teams winning the team contest. In 2013, Alex Wade won a gold medal with the highest score among all participants whereas one of the US teams (Team Red) won the team contest. In 2014, Darryl Wu won an individual gold medal, and USA Red won a team gold medal. In 2015, James Wedgwood, James Bloxham, and Kevin Yang won individual gold



medals. USA Red finished in first place among all teams based on the average score in the individual contest and also finished in second place in the team event. In 2016, US contestant James Wedgwood won a gold medal in the individual round for the second year running and US contestants also scooped three silver medals and two bronze medals. Additionally, USA Red earned the team trophy for the highest combined score on the individual event. Continuing the trend, the teams also won six medals at the 2017 IOL. Brian Xiao of USA Red won a gold medal while silver medals went to three other US contestants and bronze to two other US contestants. In 2018, perhaps the USA's best-ever year, USA Blue won gold in the team contest and USA Red won silver; four members won individual gold medals, three won silver, and one won bronze. USA Blue came first for combined individual scores. In 2019, two members won gold and five won silver, and USA Red earned the team trophy for combined individual scores. The Olympiad was not held in 2020. In 2021, it was held virtually. One member won gold, four earned bronze, and two earned an honorable mention. USA Red won silver in the team contest and USA Blue earned an honorable mention

You may find more information about the results at <https://ioling.org/results/USA>.

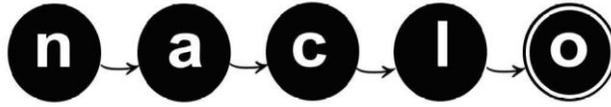
### **How well did Canada do at the IOL?**

Canada participated in the IOL for the first time in 2011. The team received a bronze medal (Daniel Mitropolsky) in 2011. In 2013, Daniel Lovsted won a bronze medal. In 2014, Daniel Lovsted won an individual gold medal, Yan Huang received a silver medal, Simon Huang got a bronze medal, while the Canadian team finished in second place overall based on the average score in the individual contest. In 2015, Emma McLean received a bronze medal. In 2018, Ken Jiang and Kevin Liang received bronze medals, and Shuli Jones received an honorable mention. In 2019, Ken Jiang won a gold medal, and Tianqi Jiang and Nathan Kim received silver medals. Furthermore, the Canadian Anglophone team finished in third place by combined score in the individual contest. In 2021, Kunaal Chandrashekar received a bronze medal and Thomas Frith received an honorable mention. The Canadian Anglophone team received a bronze medal in the team contest.

You may find more information about the results at <https://ioling.org/results/CAN> and <https://ioling.org/results/CEN>.

### **What if my question was not answered above?**

If you have further questions, please contact [nacloinquiries@googlegroups.com](mailto:nacloinquiries@googlegroups.com).



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Babette Verhoeven -- Aquinas College  
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