



Center for Community OutReach Development (CORD)
CHSB19 5th Floor
933 19th Street South
Birmingham, AL 35294-2041

September 21, 2018

2018 UAB-CORD CENTRAL ALABAMA REGIONAL SCIENCE & ENGINEERING FAIR

Science Teachers and Administrators in the
Central Alabama Regional Science and Engineering Fair Area,

The University of Alabama at Birmingham and the UAB Center for Community OutReach Development are excited to host the **Central Alabama Regional Science and Engineering Fair** **scheduled for March 3, 2018**. The fair will be a single-day event held at the UAB Campus Recreation Center located at 1501 University Blvd., Birmingham, AL 35294. Middle and high school students will set up their projects beginning at 7:30 am. Judging of projects will occur from 9:00 am – 12:00 pm.

The following counties will be eligible to participate in the 2018 UAB-CORD Central Alabama Regional Science and Engineering Fair: Bibb, Blount, Calhoun, Cherokee, Chilton, Clay, Cleburne, Coosa, Dekalb, Etowah, Jefferson, Randolph, Saint Clair, Shelby, Talladega, Walker and Winston County.

We will conduct the traditional fair, thus selecting students to compete at the Alabama State Science and Engineering Fair (ASEF) and the Intel International Science and Engineering Fair (ISEF). We recognize that in past years many students did not meet the timing requirements set out by ISEF and were unable to compete. Therefore, students who are unable to meet the ISEF timetable requirement will be allowed to present at the 2018 CARSEF for non-ISEF-related awards and prizes. We expect to have at least 40 such awards. To enable teachers and students to submit the required application paperwork in an efficient and timely manner, enclosed is a flyer which invites you and your students to join us for *“Project/Application Paperwork Training Sessions.”*

Please visit our website at www.uab.edu/carsef for additional information. Please also note that the **Deadline for all Applications to the UAB Central Alabama Regional Science and Engineering Fair (CARSEF) is January 26, 2018**. All entries will be reviewed by the CARSEF Scientific Review Committee. All presenters will be required to meet the fair’s sponsorship, safety, animal and human use requirements, prior to being allowed to present. If the application deadlines pose an issue with the date of your fair please call the CARSEF office or email kjarrett@uab.edu for other arrangements.

Thank you for promoting excellence in science, math and engineering education in Alabama. We look forward to seeing you and your students at the 2018 Central Alabama Regional Science and Engineering Fair (CARSEF) and to awarding prizes to your students!

Please feel free to contact us at (205) 934-5125 (CARSEF Office) or (205) 934-5171 (CORD main office) or you can reach us by email at kjarrett@uab.edu.



J. Michael Wyss, Ph.D.
CORD Director
Professor of Cell Biology
and Medicine

Shirley S. Ginwright
CORD Program Director

Kevin A. Jarrett
CORD Program Coordinator



Enclosures: 2018 CARSEF: Forms List, Applications, Training Session Flyer and Brochure

*For information regarding the
2018 Intel International Science and Engineering Fair
in Pittsburg, Pennsylvania visit
www.societyforscience.org*

UAB-CORD

Central Alabama Regional Science & Engineering Fair (CARSEF)

~ FORMS REQUIRED FOR ALL PROJECTS ~

UAB CARSEF Individual or Team Entry Form

*Form 1 - *Checklist for Adult Sponsor*

Form 1A - *Student Checklist*

Research Plan/Project Summary

*Form 1B - *Approval Form*

Abstract and Certification Form

ADDITIONAL FORMS

Only required if the student is....

*Conducting research in an institutional/industrial setting or any
setting outside of school or home*

Form 1C - Regulated Research Institutional/Industrial Setting Form

*Conducting research involving human subjects, vertebrate animals, potentially
hazardous biological agents, cell cultures and controlled substances*

*Form 2 - Qualified Scientist Form

*Form 3 - Risk Assessment Form

*Form 4 - Human Subjects Form

*Forms 5A & 5B - Vertebrate Animal Form

*Form 6A - Potentially Hazardous Biological Agents Form

*Form 6B - Human and Vertebrate Animal Tissue Form

Conducting research that is a continuation from a previous year's project

Form 7 - Continuation Projects Form

ALL FORMS CAN BE FOUND ON OUR WEBSITE

www.uab.edu/carsef

Please note that all forms marked with () must be signed and
dated prior to experimentation!!*

2018 Central Alabama Regional Science & Engineering Fair (CARSEF) Individual Entry Form

Incomplete entry forms will not be processed
PLEASE PRINT CLEARLY OR TYPE

Deadline
January 26, 2018

Name of Student: _____ Age _____ Gender _____

Mailing Address (street, city, zip) _____

Telephone (home, cell) _____ E-Mail _____

School Name _____ Grade _____

Sponsoring Teacher _____ Email _____

Project Title _____

Which major category letter best describes your project? (Place letter in box)
Category descriptions are on the back of this entry form.

This is the category you will compete in at CARSEF

- | | | |
|---------------------------------------|--|--------------------------|
| A. Biology (including microbiology) | F. Medicine and Health Sciences | <input type="checkbox"/> |
| B. Chemistry (including biochemistry) | G. Physical Sciences (including space science) | |
| C. Engineering | H. Behavioral and Social Sciences | |
| D. Environmental and Earth Sciences | I. Energy and Transportation | |
| E. Mathematics and Computer Sciences | | |

All applicants to the Regional Fair must complete this entry form along with the following five forms:

1. Form 1 - Checklist for Adult Sponsor
2. Form 1A - Student Checklist
3. Research Plan/Project Summary
4. Form 1B - Approval Form
5. Abstract and Certification Form

My project meets all requirements for entry into the INTEL International Science and Engineering Fair, and I wish to compete for a position at the State or International Fair.

I am a middle school student and I understand that as such I will be competing for local prizes and for entry into the State (but not International) Fair.

We certify that we will abide by the regulations of the Central Alabama Regional Science and Engineering Fair (CARSEF). Please call if your school fair will be held between January 26 and March 3 for entry into the March 3, 2018 CARSEF.

Signature of Student: _____ Signature of Parent: _____

Signature of Sponsoring Teacher: _____

***Note: You will be contacted via email with important CARSEF information.
Please provide an accurate email address as requested above.**

Send completed applications to CARSEF, c/o UAB-CORD, 5th Floor CHSB19, 933 19th Street South, Birmingham, AL 35294-2041. For additional information, Call (205)934-5125 (CARSEF office) or (205)934-5171 (Cord main office) or e-mail us at kjarrett@uab.edu.

CARSEF Category Descriptions

A. Biology (including microbiology)

Cell Biology
Cell and Molecular Genetics
Immunology
Molecular Biology
Antibiotics, Antimicrobials
Bacteriology
Microbial Genetics
Virology
Animal Development
Animal Ecology
Animal Husbandry
Animal Pathology
Animal Physiology
Animal Population Genetics
Animal Systematics

B. Chemistry (including biochemistry)

General Biochemistry
Metabolism
Structural Biochemistry
Analytical Chemistry
Inorganic Chemistry
Organic Chemistry
Physical Chemistry
General Chemistry

C. Engineering

Bioengineering
Civil, Construction, Chemical, Industrial,
Electrical, Computer, and
Mechanical Engineering
Processing
Material Science
Thermodynamics, Solar
Robotics

D. Environmental and Earth Science

Climatology, Weather
Geochemistry, Mineralogy
Paleontology
Geophysics
Planetary Science
Tectonics
Air Pollution and Air Quality
Soil Contamination and Soil Quality
Water Pollution and Water Quality
Bioremediation
Ecosystems Management
Environmental Engineering
Land Resource Management, Forestry
Recycling, Waste Management
Plant Development
Plant Ecology
Plant Physiology
Plant Systematics
Plant Agriculture/Agronomy
Plant Genetics
Photosynthesis
Plant Evolution

E. Mathematics and Computer Sciences

Algebra
Analysis
Applied Mathematics
Geometry
Probability and Statistics
Algorithms, Databases
Artificial Intelligence
Networking and Communications
Computational Science, Computer Graphics
Software Engineering, Programming Languages
Computer System, Operating System

F. Medicine and Health Sciences

Disease Diagnosis and Treatment
Epidemiology
Genetics
Molecular Biology of Diseases
Physiology and Pathophysiology

G. Physical Sciences (including space science)

Astronomy
Atoms, Molecules, Solids
Biological Physics
Instrumentation and Electronics
Magnetics and Electromagnetics
Nuclear and Particle Physics
Optics, Lasers, Masers
Theoretical Physics
Theoretical or Computational Astronomy

H. Behavioral and Social Sciences

Clinical and Developmental Psychology
Cognitive Psychology
Physiological Psychology
Sociology

I. Energy and Transportation

Aerospace and Aeronautical Engineering
Aerodynamics
Alternative Fuels
Fossil Fuel Energy
Vehicle Development
Renewable Energies

UAB CORD

empowering rising stars

*Center for Community Outreach Development
The University of Alabama at Birmingham*

2018 Central Alabama Regional Science & Engineering Fair (CARSEF)

Team Entry Form

Incomplete entry forms will not be processed

PLEASE PRINT CLEARLY OR TYPE

Deadline

January 26, 2018

Team Participants (up to 3 members):

Student 1 *Team Leader*

Name of Student _____ Age _____ Gender _____ Grade _____

Address (street, city, zip) _____

Telephone _____ E-mail _____

Student 2

Name of Student _____ Age _____ Gender _____ Grade _____

Address (street, city, zip) _____

Telephone _____ E-mail _____

Student 3

Name of Student _____ Age _____ Gender _____ Grade _____

Address (street, city, zip) _____

Telephone _____ E-mail _____

***Note: You will be contacted via email with important CARSEF information.
Please provide an accurate email address as requested above.**

School Name _____ Telephone _____

Sponsoring Teacher _____ Email _____

Project Title _____

Which major category letter best describes your project? (Place letter in box)

Category descriptions are on the back of this entry form.

This is the category you will compete in at CARSEF

- | | |
|---------------------------------------|--|
| A. Biology (including microbiology) | F. Medicine and Health Sciences |
| B. Chemistry (including biochemistry) | G. Physical Sciences (including space science) |
| C. Engineering | H. Behavioral and Social Sciences |
| D. Environmental and Earth Science | I. Energy and Transportation |
| E. Mathematics and Computer Sciences | |

All applicants to the Regional Fair must complete this entry form along with the following five forms:

1. Form 1 - Checklist for Adult Sponsor
2. Form 1A - Student Checklist
3. Research Plan/Project Summary
4. Form 1B - Approval Form
5. Abstract and Certification Form

Our project meets all requirements for entry into the INTEL International Science and Engineering Fair, and we wish to compete for a position at the State or International Fair.

We are middle school students and we understand that as such we will be competing for local prizes and entry into the State Fair, but not for entry into International Fairs.

We certify that we will abide by the regulations of the Central Alabama Regional Science and Engineering Fair (CARSEF). Please call if your school fair will be held between January 26 and March 3 for entry into the March 3, 2018 CARSEF.

Signature of Team Leader: _____ Team Leader's Parents: _____

Signature of Sponsoring Teacher: _____

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Immunology
Molecular Biology
Antibiotics, Antimicrobials
Bacteriology
Microbial Genetics
Virology
Animal Development
Animal Ecology
Animal Husbandry
Animal Pathology
Animal Physiology
Animal Population Genetics
Animal Systematics

B. Chemistry (including biochemistry)

General Biochemistry
Metabolism
Structural Biochemistry
Analytical Chemistry
Inorganic Chemistry
Organic Chemistry
Physical Chemistry
General Chemistry

C. Engineering

Bioengineering
Civil, Construction, Chemical, Industrial,
Electrical, Computer, and
Mechanical Engineering
Processing
Material Science
Thermodynamics, Solar
Robotics

D. Environmental and Earth Science

Climatology, Weather
Geochemistry, Mineralogy
Paleontology
Geophysics
Planetary Science
Tectonics
Air Pollution and Air Quality
Soil Contamination and Soil Quality
Water Pollution and Water Quality
Bioremediation
Ecosystems Management
Environmental Engineering
Land Resource Management, Forestry
Recycling, Waste Management
Plant Development
Plant Ecology, Plant Physiology
Plant Systematics, Plant Genetics
Plant Agriculture/Agronomy
Photosynthesis
Plant Evolution

E. Mathematics and Computer Sciences

Algebra
Analysis
Applied Mathematics

Geometry
Probability and Statistics
Algorithms, Databases
Artificial Intelligence
Networking and Communications
Computational Science, Computer Graphics
Software Engineering, Programming Languages
Computer System, Operating System

F. Medicine and Health Sciences

Disease Diagnosis and Treatment
Epidemiology
Genetics
Molecular Biology of Diseases
Physiology and Pathophysiology

G. Physical Sciences (including space science)

Astronomy
Atoms, Molecules, Solids
Biological Physics
Instrumentation and Electronics
Magnetics and Electromagnetics
Nuclear and Particle Physics
Optics, Lasers, Masers
Theoretical Physics
Theoretical or Computational Astronomy

H. Behavioral and Social Sciences

Clinical and Developmental Psychology
Cognitive Psychology
Physiological Psychology
Sociology

I. Energy and Transportation

Aerospace and Aeronautical Engineering
Aerodynamics
Alternative Fuels
Fossil Fuel Energy
Vehicle Development
Renewable Energies

“PROJECT / APPLICATION PAPERWORK TRAINING SESSIONS”

**FOR THE UAB-CORD
2018 CENTRAL ALABAMA REGIONAL
SCIENCE AND ENGINEERING FAIR**

LOCATION

**University of Alabama at Birmingham
Center for Community OutReach Development (CORD)
Community Health Services Bldg. (CHSB19)
Room 501
933 19th Street South, 5th Floor
Birmingham, AL 35294-2041**

SESSION DATES

~All Sessions are from 10:00 am - 12:00 noon ~

JANUARY 20, 2018

Teacher/Parent/Student Training Session

**This session is for application/paperwork issues before application
deadline on January 26, 2018**

FEBRUARY 17, 2018

Teacher/Parent/Student Session

**This session is for poster/project issues before the fair
on March 3, 2018**

**TO REGISTER FOR ONE OF THE “TRAINING SESSIONS”
~CALL THE REGIONAL FAIR OFFICE AT CORD (205) 934-5125~**

Dates to Remember

January 26, 2018
CARSEF Application
Packet Deadline

March 3, 2018
UAB Regional Fair (CARSEF)
(Birmingham, Alabama)

April 5 - 6, 2018
Alabama State Fair (ASEF)
(Huntsville, Alabama)

May 13 - 18, 2018
Intel International Fair (ISEF)
(Pittsburg, Pennsylvania)

Sponsored in Part by:



CARSEF At-A-Glance

7:00 - 8:30 am	Registration and Setup (Jr. & Sr. Division)
7:30 - 9:00 am	Display & Safety Review
8:00 - 9:00 am	Judges Briefing
9:00 - 10:00 am	Student/Parent Orientation
9:00 am - 12:00 pm	Judges Project Review (9-10am without students) (10am-12pm with students)
12:00 - 1:30 pm	Lunch
12:00 - 3:00 pm	Exhibit Hall Open to Public
1:00 - 4:00 pm	Judges Selection Session
1:30 - 3:30 pm	Campus Showcase
4:00 pm	Students Return to Rec. Center
3:30 - 4:30 pm	Awards Ceremony
4:30 - 5:30 pm	Project Breakdown (Jr. & Sr. Division)

Tentative Schedule
(Subject to change)



UAB-CORD 2018 Central Alabama Regional Science and Engineering Fair

For Middle and High School Students Grades 5-12

Bibb **Elmore**
Blount **Etowah**
Calhoun **Jefferson**
Cherokee **Randolph**
Chilton **St. Clair**
Clay **Shelby**
Cleburne **Talladega**
Coosa **Walker**
Dekalb **Winston**



March 3, 2018

UAB Campus Recreation Center
1501 University Boulevard
Birmingham, Alabama 35294

CARSEF

The University of Alabama at Birmingham (UAB) Center for Community Outreach Development (CORD) will host the Central Alabama Regional Science and Engineering Fair (CARSEF) at the UAB Campus Recreation Center, March 3, 2018. We will conduct the traditional fair, thus selecting students to compete at the Alabama State Science and Engineering Fair (ASEF) in Huntsville, Alabama, and the INTEL International Science and Engineering Fair (ISEF) in Pittsburg, Pennsylvania. Students who are unable to meet the ISEF timetable and/or requirements will be allowed to present at the regional fair and compete for the non-ISEF-related awards and prizes. Such students will not be eligible to advance to the State Fair and INTEL.



Path to Intel ISEF

To reach the Intel ISEF, students must participate in a high school or local science fair.

Participation at the high school or local level enables students to compete in a regional or state fair (unless otherwise stated by your school rules).

Students are eligible to compete at the Intel ISEF if they win at the Regional or State level. The UAB-CORD Regional Science and Engineering Fair can send up to 4 finalists directly to the International Science and Engineering Fair.

CARSEF Rules and Procedures

All students who wish to compete in the UAB Regional Fair must submit all required application forms by 5:00 pm, January 26, 2018. Forms may be e-mailed as PDFs, faxed or mailed to:

Central Alabama Regional Science and Engineering Fair (CARSEF)
c/o CORD, Room 503, CHSB 19
933 19th Street South
Birmingham, AL 35294-2041

Phone: 205-934-5125

Fax: 205-934-5158

E-Mail: kjarrett@uab.edu

Visit our website, www.uab.edu/carsef to find out more about CARSEF guidelines & requirements!

CARSEF Application Forms

Application packets submitted to the CARSEF must include:

- UAB CARSEF Form (Individual or Team)
- Checklist for Adult Sponsor (Form I)
- Student Checklist (Form IA)
- Research Plan Form
- Approval Form (Form IB)
- Abstract and Certification Form

General Science and Engineering Fair Requirements

Students who wish to compete for placement in the State or Intel ISEF must fulfill all timing issues and requirements of the International Fair. These include the following:

- 1) Any student in grades 9-12 or equivalent is eligible, none of whom has reached age 20 on or before May 1st preceding the Intel ISEF may compete in the Regional Senior Division. Any student in grades 5-8 may compete in the Regional Junior Division.
- 2) Each student may enter only one project which covers research done over a maximum of 12 continuous months between January 2017 and May 2018.
- 3) Team projects may have a maximum of three members.
- 4) Projects which are continuations of previous year's work and which require IRB/SRC approval must be re-approved prior to experimentation/data collection for the current year.
- 5) All projects must adhere to the Ethics Statement below.
- 6) Prior to experimentation, a local or regional Institutional Review Board (IRB) or Scientific review Committee (SRC) associated with the Intel ISEF-affiliated fair must review and approve project involving human participants, vertebrate animals, and potentially hazardous biological agents.

ETHICS STATEMENT

Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include plagiarism, forgery, use or presentation of other researcher's work as one's own and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs or the Intel ISEF.