THE ASTRONOMY RESEARCH SEMINAR

Publish a Scientific Paper in Your Name!

Sponsored by InStAR and BRIEF

InStAR = Institute for Student Astronomical Research
• University and College Accredited
• Ten Years of Success Publishing Student Research
• Developed the College Credit Course at Cuesta College

BRIEF = Boyce Research Initiatives and Education Foundation
• Provides Online and In-person Classes
• Provides the Robotic Telescopes
• Provides the Software and On-Line Support
• Provides Tailored Instructional Materials

Boyce Astro: http://www.boyce-astro.org
The GOAL: LEARN SCIENCE BY DOING SCIENCE
DOING SCIENCE MEANS PUBLISHING SCIENTIFIC PAPERS

LEARNING TOPICS
- Stars, Telescopes, Cameras
- Astronomical Data, Sky Coordinates
- Double Stars, Kepler’s Laws
- Astronomical Software
- Basic Statistics and Graphing
- Some Practical Mathematics

SKILLS DEVELOPED
- College Registration & Self-Discipline
- Scientific Method and Analysis
- Teamwork / Leadership / Sharing the Load
- Proposal Writing and Presentation
- Project Planning and Management
- Visualization of Data; Oral Presentations

Scientific Writing, Editing and Publication – A Published Paper Is Required

Boyce Astro: http://www.boyce-astro.org
How It All Works – You’re in Control

Request your observation

Measure

Receive your images and data

Analyze

Write & publish

iTelescope World Wide Network
So What – What’s the Big Deal

• You’re recognized for publishing a scientific paper – how many people can say that?
  ➢ College graduates don’t even get this opportunity
  ➢ Go to the top of the list for College Admissions and Scholarships
  ➢ Be proud always of making your contribution and you’ll be in the permanent record
  ➢ Expand: Asteroids, exoplanets, occulting binaries, cataclysmic binaries, ...
  ➢ Get 1st College Credit (get an A)
Logistics

- Syllabus
- Weekly outline
- Access to video lessons
- Forum URL

Astronomy Research Seminar Online Syllabus

ASTR 299 Online, a hybrid combination of in-person meetings, online instruction, and student team meetings.

Online meetings:
- Will be conducted for most weeks.
- Login information is included in Week-by-Week details.
- Plan on each Tuesday at 7:30pm Pacific.

In-Class meetings: There will be a minimum of four (4) Face-to-Face meetings.

Seminar Instructor: Dr. Russell M. Genet, russgenet@豆豆.com, (805) 439-3305
Seminar Assistant Instructors:
  - Grady Boyce (grady@oyce-astro.org) 805-274-3365 ext. 3
  - Pat Boyce (pat@oyce-astro.org) 335-274-3365 ext. 2

Robotics: telescope: Telescope Network & Boyce Astronomical Research Observatory (BARO)
Online self-paced learning units: https://sidpuzzle.com/oyce/pasuda
Forums: http://forums.oyce-astro.org/

Syllabus Contents
MUST PERFORM NOW .................................................................................................................. 3
Overview ................................................................................................................................... 3
Background ............................................................................................................................... 3
Expectations .............................................................................................................................. 4
Frequently Asked Questions .................................................................................................. 4
- How often, how long, and when will classes meet? Is this flexible? .................................. 4
- How much homework will there be? .................................................................................. 4
- What tests will I have to take? ............................................................................................. 5
- I don't like math but I like the sky. Do I need to be a math whiz to take this course? ........... 5
- I want to do research on ______ (XYZ). Why do we have to do a double star project? ....... 5
- Do I need to have a computer? Internet access? ................................................................. 5
- What software will I need to use? What if I don't have it? ................................................ 5
- I want to do this by myself. I'm not interested in being on a team. Can I do that? .............. 5
- How are teams formed? How many students are on each team? ....................................... 6
- Can I get high school credit and college credit for this seminar? ....................................... 6
- Will this affect my high school GPA? .................................................................................. 6
- How is the college course graded? ....................................................................................... 6
- Are students expected to contribute roughly equally to research project? ....................... 6
- I want to do this but I'm in the 7th grade. What can I do? .................................................. 6
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  - Community of practice
  - Source of all information
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  - Weekly outline
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  - Forum URL
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- Messaging
  - Text
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- Messaging
  - Text
- Tools
  - Remote Telescopes
  - Server with all necessary tools
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  • Text

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  • Remote Telescopes
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• Classes
  • In person, and/or
  • Online
Signing Up for the Seminar

• FOR ALL SAN DIEGO STUDENTS  (WHETHER FOR CREDIT OR NOT)
  • Sign up online at: http://www.boyce-astro.org/
  • You will receive an email to sign up for forums.boyce-astro.org
    • This will create your Forum, Messaging, and BARC accounts
  • There is no charge for the course for signing up to Boyce-Astro Seminars

• FOR ALL TAKING THE COURSE FOR CUESTA COLLEGE CREDIT
  • You will ALSO need to enroll and register for your college by their procedures
  • Go to forums.boyce-astro.org for links to Cuesta’s registration
  • The college registration costs $0 for high school students, $48 for others
  • Take the handout for Cuesta College Registration to your parents
  • Your instructor can help clarify and assist in these steps
Time Commitment: About 2 hours per week plus weekly class time
Online Weekly Class: Day and time set by class members (45 to 90 minutes long)
Work in Teams: 3 to 5 with different abilities is best
Orientation Meeting: Week of January 30 – location, day and evening time to be announced
Proposal Presentation: All teams present on a Saturday morning (current estimate is March 18)
Final Presentation: All teams present on a Saturday morning (current estimate is May 20)

Further Information and questions: Go to forums.boyce-astro.org or visit
• www.instar.org
• www.boyce-astro.org
• Grady Boyce at 1- 855-BRIEF55 x3 or email grady@boyce-astro.org
• Pat Boyce at 1- 855-BRIEF55 x2 or email pat@boyce-astro.org

Questions?