



FUTURE for Team-Based Design in **BME**
Furthering University of Tennessee Undergraduate Research Education BioMedical Engineering

Why do we care about the FUTURE?

Current courses

1. Close-ended problems
2. Single analytical solution
3. Individual work
4. One instructor

New course

1. Open-ended problems
2. Multiple possible solutions
3. Team work
4. Several advisors

Biomedical engineering progress requires ***bridging the gap*** between ***theory-based undergraduate education*** and a ***problem-solving engineering profession***

Outline for Today

- Why do we care about the FUTURE?
- FUTURE for team-based design in BME
- Senior capstone design course
- MABE Department projects
- Graduate School of Medicine projects
- Oak Ridge National Laboratory projects
- Payroll details
- Answer your questions!

FUTURE for Team-Based Design in BME

Program Purpose

NIH Announcement

- Enhance existing course
- Target senior undergrads
- Address innovative and/or ground-breaking development
- Multidisciplinary training
- Diversity recruitment

Purpose: This FOA, issued by the National Institute of Biomedical Imaging and Bioengineering (NIBIB) and the *Eunice K. Shriver* National Institute of Child Health and Human Development (NICHD), encourages applications from institutions that propose to establish new or to **enhance existing team-based design courses** in undergraduate Biomedical Engineering departments or programs. This FOA **targets undergraduate students at the senior level** but may also include junior undergraduates and first-year graduate students. Courses that **address innovative and/or ground-breaking development, multidisciplinary/interdisciplinary training, and diversity recruitment** are especially encouraged.

Part I Overview Information

Department of Health and Human Services

Participating Organizations

National Institutes of Health (NIH), (<http://www.nih.gov>)

Components of Participating Organizations

National Institute of Biomedical Imaging and Bioengineering (NIBIB), (<http://www.nibib.nih.gov/>)

Eunice K. Shriver National Institute of Child Health and Human Development (NICHD), (<http://www.nichd.nih.gov/>)

Title: **Team-Based Design in Biomedical Engineering Education (R25)**

Announcement Type

New

Program Announcement (PA) Number: PAR-10-140

NOTICE: Applications submitted in response to this Funding Opportunity Announcement (FOA) for Federal assistance must be submitted electronically through Grants.gov (<http://www.grants.gov>) using the SF424 Research and Related (R&R) forms and the SF424 (R&R) Application Guide.

APPLICATIONS MAY NOT BE SUBMITTED IN PAPER FORMAT.

This FOA must be read in conjunction with the application guidelines included with this announcement in [Grants.gov/Apply for Grants](#) (hereafter called Grants.gov/Apply).

A registration process is necessary before submission and applicants are highly encouraged to start the process at least four

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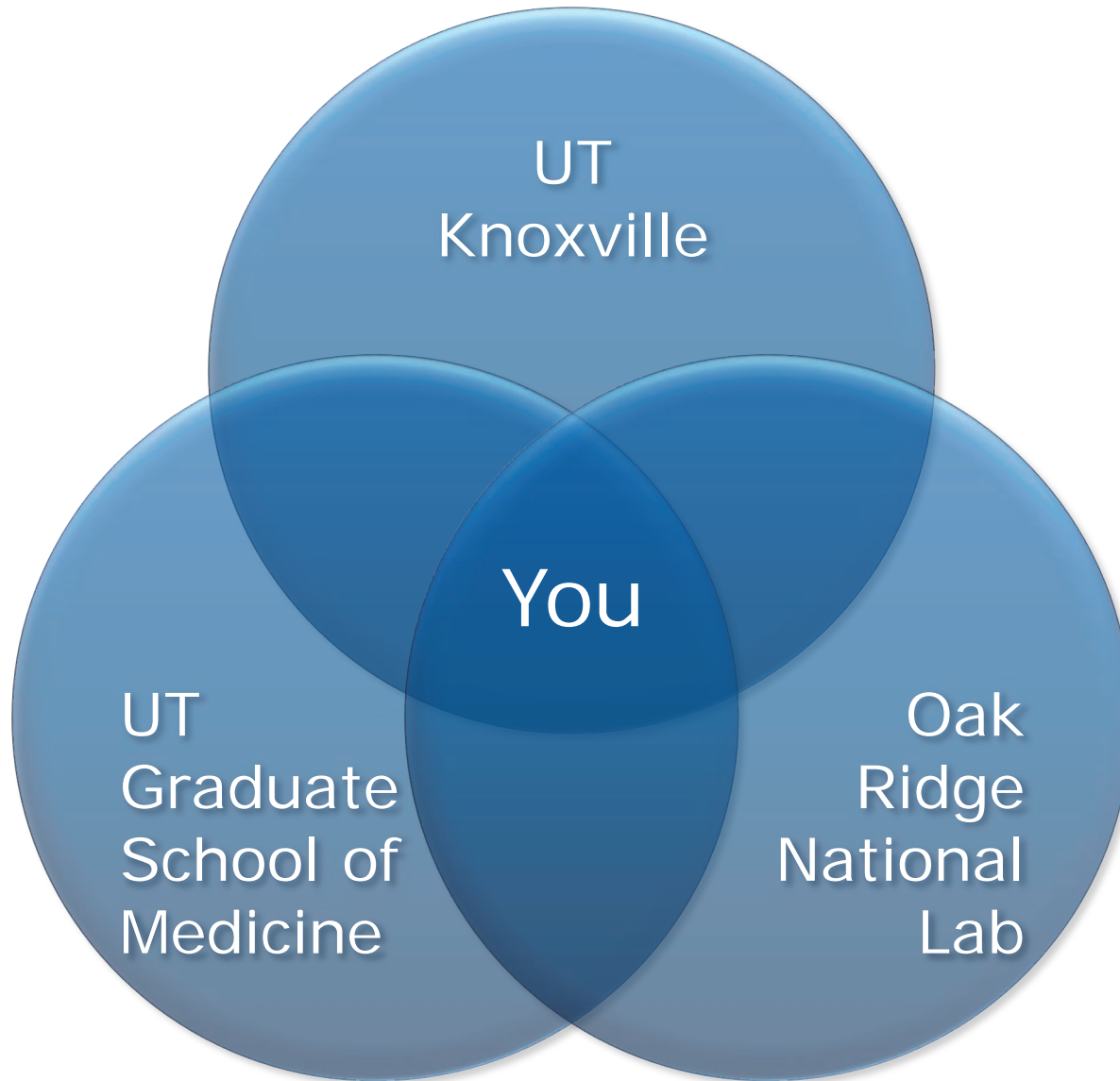
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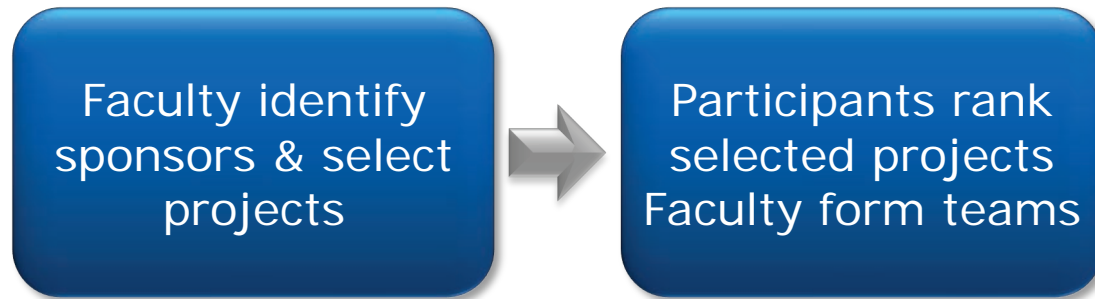
FUTURE for Team-Based Design in BME

Unique Multidisciplinary Arrangement



FUTURE for Team-Based Design in BME

Components



One Aspect of Team Formation: Cognitive Mode

Know Thyself

Information Collection

Decision Making

Experiment
prototyper
tester

Extraverted

Ideation
entrepreneur
innovator

Organization
coordinator
methodologist

Extraverted

Community
diplomat
conciliator

Chandana
Kristen
Derek
Kyle

Bill

Bill
Jakob
Kyle

Hannah
Timothy
Adam
Bryan

Sensing

Timothy

Clifton

Intuition **Thinking**

Feeling

Hannah

Sharae

Bryan

Jakob

Kristen
Chandana
Clifton

Derek

Knowledge
investigator
inspector

Introverted

Imagination
strategist
visionary

Analysis
specialist
reviewer

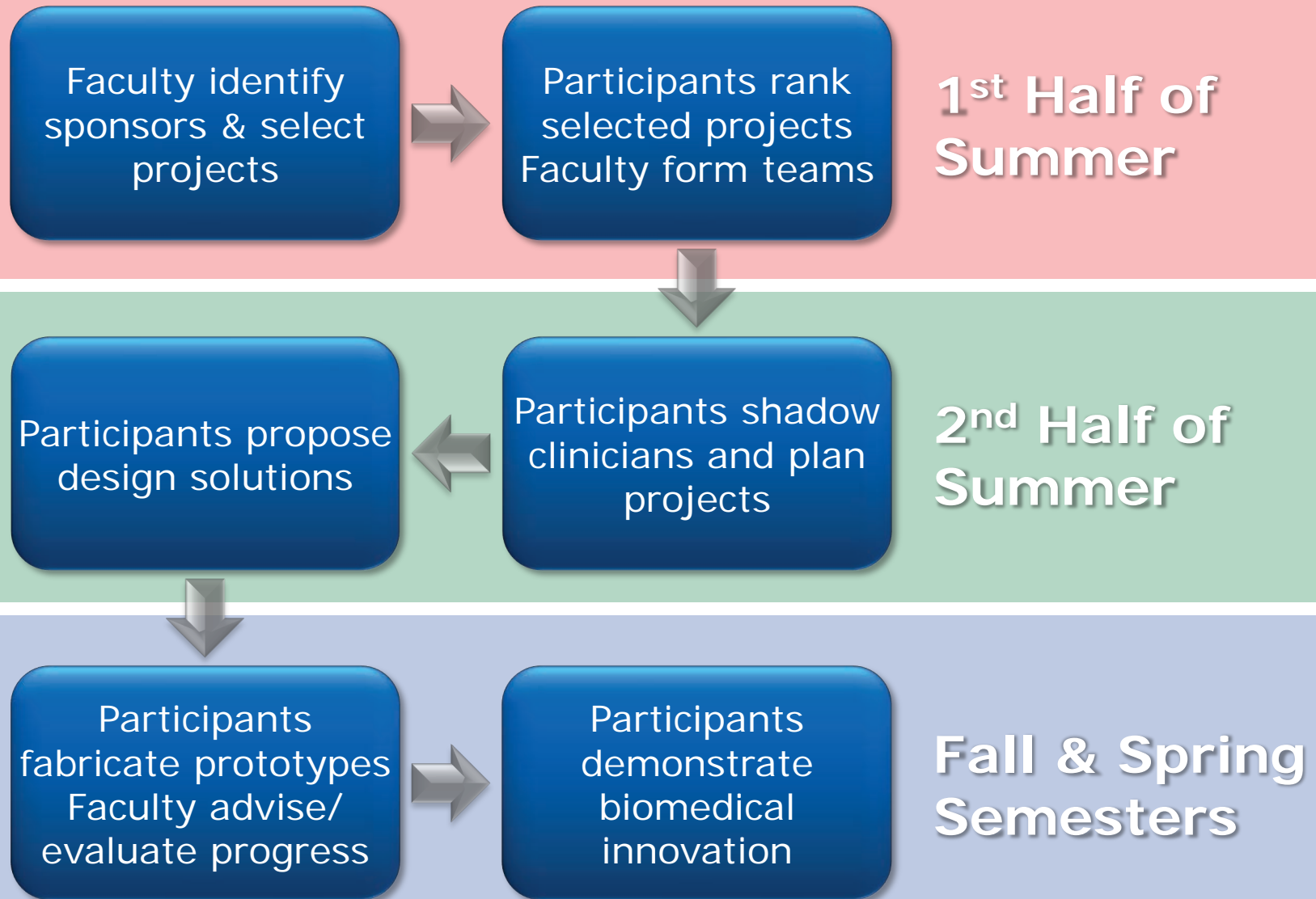
Introverted

Evaluation
critiquer
need finder

Adam

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Components



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