

RESEARCH-BASED HIGH SCHOOL COURSE

Uchenna Academy in collaboration with UHN

INNOVATIONS HUB

The interdisciplinary studies courses (course code IDC3O & IDC4U) can be taken by students in grades 11 & 12.

The course is delivered in collaboration with the University Health Network (UHN) and students will visit the research facilities at UHN during each unit of the course.

RESEARCH PROJECT:

Development of Assistive Devices

TO INQUIRE/REGISTER:

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WHAT ARE INTERDISCIPLINARY COURSES (IDC)?

Interdisciplinary courses utilize an approach to learning that integrates different subjects & disciplines. This is an integral part of high school education, as it will help students navigate today's increasingly interconnected world, which necessitates information literacy. Through IDCs, our students gain insight about the research process, information management, collaboration, critical & creative thinking & technological applications.



At Uchenna Academy, we have combined studies in:

- Data Management & Statistics
- Human Physiology
- Mobility
- Marketing



The lessons in each topic will focus on the central course project: design of a product to restore the desired mobility function in persons with disabilities.

A product will need to be approved by the research panel and will be showcased at the end of the term during the Research Day at UHN.

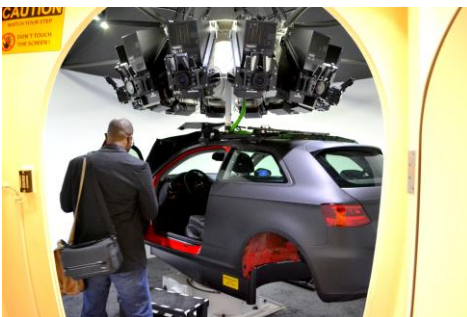
“A great discovery solves a great problem but there is a grain of discovery in any problem.”

George Polya

IMPORTANCE OF RESEARCH STUDIES

We live in a knowledge-based economy, where production of knowledge has become intertwined in the economic system, and idea development & innovation occupies centre stage & is a key feature of economic life.

Everything that is learned in Uchenna Academy classroom is taught in real-world social & practical settings to facilitate innovative thinking.



WHAT DOES THE UCHENNA ACADEMY IDC COURSE LOOK LIKE?



IDC3O & IDC4U are semestered courses, starting on Monday September 11, 2017.

Class time is Mondays & Wednesdays 3:30-6pm.

The final class will be a student led presentation at UHN's Research Day, on Monday January 29, 2018.

IDC3O | IDC4U COURSE OUTLINE:

UNIT 1 | THEORY & PROCESSES OF RESEARCH

- Power of Information | Introduction to Statistics
- Analyzing data | Measures of Central tendency, Confidence Intervals, z-scores
- How to read & write a scientific paper
- Introduction to mobility issues
- UHN Visit | Tour of research facilities, presentation, balance mobility tests



UNIT 2 | SCIENTIFIC FOUNDATION

- Scientific background | Human Physiology
 - Levels of Organization
 - Muscular System
 - Nervous System
 - Respiratory System
 - Cardiovascular System
 - Sensory Systems
 - Homeostasis
- UHN Visit | Experiments & Data Collection



UNIT 3 | IMPLEMENTATION & EVALUATION

- Project development
- Experimental Design
- UHN Visit | "Dragon's Den" presentations - Pitch your idea to the research team
- Product development
- Scientific Article write-up



UNIT 4 | IMPACT & CONSEQUENCE

- Marketing Strategies
 - Marketing Fundamentals
 - Positioning
 - Market Segmentation
 - Product Life Cycle, Future Directions
- Product Marketing development | Digital or Bristle Board presentation
- UHN Visit | Research Day at UHN

