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| --- | --- |
| **Instructor** | **Dr. Marc Schwartz** |
| **Office** | **420 Hammond Hall** |
| **Phone** | **817-272-5641** |
| **e-mail** | [**schwarma@uta.edu**](mailto:schwarma@uta.edu) |
| **Faculty Profile** | [**https://www.uta.edu/mentis/public/#profile/profile/edit/id/3844/category/1**](https://www.uta.edu/mentis/public/#profile/profile/edit/id/3844/category/1) |
| **Office Hours** | **Wednesdays 4:00-5:00 or by appointment** |

**Class meets in 105 Science Hall Wednesdays from 5:30 to 8:20**

[**http://www.uta.edu/maps/map?id=SH**](http://www.uta.edu/maps/map?id=SH)

**Description**

EDUC 5365 uses a number of models introduced earlier in the MBE program to evaluate, improve and create educational interventions. Students explore in further depth how these models inform the learning and teaching process as well as how they compare to explicit and implicit models they currently use to assess teaching decisions as well as the progress of learning.

**Instructor Goals:**

* Embed students into a curriculum that incorporates MBE models
* Provide students opportunities to analyze their experiences in EDUC 5365 and critique their current ideas about learning and teaching
* Increase student focus, attention and understanding of key MBE models
* Provide students the opportunity to use course experiences and models to design and execute an “ideal” lesson with feedback from their peers.
* Provide students feedback on their work in improving the ideal lesson and adding two or more lessons to begin an “ideal” curriculum

**Student Learning Outcomes: Students will…**

* Critique educational interventions from the perspective of MBE models
* Design or modify an educational intervention by integrating two or more MBE models
* Create a curriculum that employs all of the MBE models to some degree

**Course Books**

* Powers, W. (1998). *Making sense of behavior: The meaning of control*. New Canaan, CT: Benchmark Publications Inc.
* Posner, M & Rothbart, M (2007). *Educating the Human Brain*. American Psychological Association: Washington DC
* Lieberman, M. D. (2013). *Social: Why our brains are wired to connect*. OUP Oxford.
* Gazzaniga, et al. (2014). *Cognitive neuroscience: The biology of the mind. neuropsychology.* (4th ed.) New York: W.W. Norton & Company.
* Hawkins, J., & Blakeslee, S. (2004). On intelligence. New York: Times Books

**Major Assignments**

1. ***Position Paper 1 (Curriculum Analysis):*** Analyze any lesson from the Conservation of Matter Curriculum (CoM). Focus on the role MBE models might have played in the lesson, how successfully they were used and what changes might improve the lesson. Finally explore how does the CoM lesson compare (and contrast) to lessons you design? The paper includes references and is graded with a rubric (1000 words). **Due Wednesday Sept 20th Midnight**
2. ***Position Paper 2 (Ideal Lesson):*** Develop a well-reasoned plan for a lesson (or intervention) in a context relevant to you. The plan begins with a PCT matrix, and is followed by a narrative that: (1) explains why you choose specific student goals as well as the student actions you think will naturally unfold given their goals; (2) insights about how the learner thinks about the lesson topic (Note: Insights should emerge from activities during the course or from the literature); and, (3) features three MBE models and your rationale for using these models. The paper includes references and is graded with a rubric (1000 words). ***Due Friday Oct 27th* Midnight**
3. ***Group Presentation (MBE Model and Educational Implications):*** In groups of two or three create a 40-minute online presentation that includes: (1) a list of questions you collect from your peers the week prior to the presentation about the focus of the week, which, in turn, can launch a short discussion about the answers to the questions or, simply, your observations and thoughts about the questions; (2) a four to six-panel storyboard that focuses on the MBE model for that week. The storyboard highlights relevant neural areas that play a role in solving a problem of your choice. Plan to collect data or questions from the class about their experience with the storyboard; (3) an overview of the *principle takeaways* (from your perspective) of the class readings; (4) an overview of *educational implications* from your perspective; and, (5) an opportunity for students to comment on “principle takeaways” and “educational implications”.  Presentations will be added to Blackboard prior to a synchronous online meeting.  **Due: See Table 1 below**
4. ***Individual Presentation (Ideal Lesson):*** Students will complete a PCT matrix for this lesson, and distribute it to the class. Small team work is possible (two students). Presentations will be limited to 15 minutes with 10 minutes for discussion. Students will present this lesson to colleagues during a face to face meeting. **Due Saturday Nov 18th at 9:00 am**
5. ***Final Project (Curriculum)*:** Students will add two additional lessons to their ideal lesson to create a mini curriculum. Each lesson will have a PCT matrix. Following the matrices is a narrative that explains your actions (as in position paper 2). The overview highlights instructional choices made (if the curriculum is original) or changes made to modify an existing curriculum, why the changes (or additions) were made and how each MBE model played a role in the development of the curriculum. The curriculum is graded with a rubric (1500 words). **Due Friday December 8th at Midnight**

Table 1: Major Assignment 3: Group Presentations

|  |  |  |
| --- | --- | --- |
| **Online meeting** | **MBE Model in Focus** | **Group Members** |
| Oct 18 | Attention | Randi Wintersole & Alshaima Almarwai |
| Oct 18 | Attention | Christopher Byrd & Brett Meadows |
| Oct 25 | Emotion | Sarah Hossain & Staci Danford |
| Oct 25 | Emotion | Lorelei Schurman & Madalyn Cano |
| Nov 1 | Social Learning | Keshia Neal & Tess Clark |
| Nov 1 | Social Learning | Nicole Masole, Hafiza Kahn & Megan Greene |
| Nov 8 | The Brain’s Operating Manual | Chelsie Halliburton & Kelsey Shannon |
| Nov 8 | The Brain’s Operating Manual | David Lohman & Alyssa Castro |

**Attendance**

If there is an emergency or unavoidable event, please let me know as soon as possible by e-mail that you won’t be able to attend class. It will not be possible to recreate classroom experiences.

**Course Grading (Five Assignments):**

1. 10% Position Paper 1: CoM Analysis
2. 10% Position Paper 2: A formal argument for an ideal lesson
3. 30% Group Presentation of an MBE model
4. 20% Individual Presentation: An ideal lesson
5. 30% Final Project: A curriculum of three or more ideal lessons

**Expectations for Out-of-Class Study**

Beyond the time required for each class meeting, students enrolled in this course should expect to spend a minimum of nine hours per week (on average) preparing for course-related activities, reading required materials, completing assignments, preparing for presentations, etc.

**Blackboard**

I will use Blackboard each week to post readings, outlines, and find (and provide feedback) for your work. You will use Blackboard to post relevant materials for your online group presentation as well as the other four assignments.

**Course Sessions**

The course schedule is below; however, I may ask to change a meeting, but will seek unanimous approval. Also note that this syllabus is not a contract and may be changed for reasonable purposes during the semester to better serve the educational needs of the students in this course. If the syllabus is changed, you will be notified via email and in class.

**Course Schedule**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Meeting | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Day | Wed | Sat | Sun | Wed | Sat | Wed | Wed | Wed | Wed | Sat |
| Date | 30-Aug | 9-Sep | 10-Sep | 27-Sep | 7-Oct | 18-Oct | 25-Oct | 1-Nov | 8-Nov | 18-Nov |
| Format | F to F | F to F | F to F | Online | F to F | Online | Online | Online | Online | F to F |
| Time | 5:30 pm-8:20 pm | 9 am-  5 pm | 9 am-  5 pm | 6 pm –  8 pm | 9 am-  5 pm | 6 pm-  8 pm | 6 pm-  8 pm | 6 pm-  8 pm | 6 pm-  8 pm | 9am-  5 pm |
| (hours) | 3 | 8 | 8 | 2 | 8 | 2 | 2 | 2 | 2 | 8 |
| Focus | (1) Tour of Blackboard; (2) Syllabus; (3) CoM Assessment | CoM  (Day 1) | CoM  (Day 2) | (1) Debrief CoM;  (2) Discuss Readings  (3) PP1-discussion | (1) PCT;  (2) LA- CoM;  (3) Instructor Presentation ***Memory*** | Group Presentation ***Emotions*** | Group Presentation  ***SCN*** | Group Presentation  ***Attention*** | Group Presentation  ***Intelligence*** | Individual Presentations- Execute one lesson |

**Meeting 1: Wednesday Aug 30th 2017 (FACE TO FACE, 5:30 pm to 8:20 pm)**

**Introduction to EDUC 5365**

* Review Syllabus & Goals
* Activity: Tour of Blackboard
* Activity: Successful Curricula- Do they exist?
* Overview: MBE Models in EDUC 5365
* Activity: CoM Assessment
* Instructor Presentation: MBE Models- PCT & Skill theory

**Assignment 1: Position Paper 1: Due Monday Sept 18th at midnight**

**Meeting 2: Saturday, Sept 9th 2017 (FACE TO FACE, 9 am to 5 pm)**

**Experimental Curriculum- Conservation of Matter (CoM)**

* Discussion: Schwartz, M. S., & Fischer, K. W. (2003). Building vs. Borrowing: The challenge of actively constructing ideas. *Liberal Education, 89*(3), 22-29.
* Discussion: Powers (1998) The Meaning of Behavior. Chapter 1-4
* Instructor Presentation: MBE Models- PCT and Skill theory (conclusion)
* Activity: Exploring an MBE curriculum- The conservation of matter

**Meeting 3: Sunday, Sept 10th 2017 (FACE TO FACE, 9 am to 5 pm)**

**Experimental Curriculum- Conservation of Matter (CoM)**

* Activity: Exploring an MBE curriculum conservation of matter (conclusion)
* Debrief CoM Curriculum

**Meeting 4: Wednesday Sept 27th 2017 (Online)**

**Debrief: Assessments MBE Models and Educational Implications**

* Discussion: Doucerain & Schwartz
* Discussion: Agung, S. & Schwartz, M.S. (2007). “Students’ Understanding of Conservation of Matter, Stoichiometry and Balancing Equation in Indonesia.” *International Journal of Science Education.* 29(13), 1679-1702.
* Discussion: Position Paper 1
* Instructor Presentation: Debrief CoM (a prototype presentation to be used as a scaffold for group presentations that follow)

By Saturday Oct 7th:

* Review from EDUC 5360 Watch (30 minutes): [Educational Assessment, a cognitive science approach](https://youtu.be/srxqEEs-FtM)

This video is an introduction to the Assessment Model Dr. Dawson developed with skill theory in mind.

* Watch (6 minutes): Skill Scale versus Lectical Scale (6 minutes): <https://www.youtube.com/watch?v=XYfpJAPO0yk&feature=youtu.be>
* Identify a topic that you would like to teach or use as a focus for Position Paper 2

**Meeting 5: Saturday Oct 7th 2017 (FACE TO FACE, 9 am to 5 pm)**

**Models of Assessment**

* Discussion: Stein Z., Dawson, T. L., & Fischer, K.W. (2009). Redesigning testing: operationalizing the new science of learning. Khine & Saleh (Eds.) *The new science of learning: computers,* *cognition and collaboration in education.* Springer Press.

<http://www.gse.harvard.edu/~ddl/articlesCopy/Stein_Dawson_Fischer_June2010_MBEj_pp207-224.pdf>

* Activity: Lexical Assessment of the Conservation of Matter
* Discussion: Schwartz & Dawson (2012). Standards & assessments: The role of depth versus breadth in student success.
* Instructor Presentation: Depth versus Breadth
* Discussion: Schwartz, M.S. & Fischer, K.W. (2010). “Interviewing: An insider’s insight into learning.” In M. Ferrari and L. Vuletic (Eds.) *The Developmental Relations Among Mind, Brain, and Education: Essays in Honor of Robbie Case*. New York: Springer Publications. 149-175.
* Instructor Demonstration: Interviewing
* Activity: Interview a fellow student

In class find out how one of your colleagues thinks about a topic you pick. This is not a teaching experience. Your goal is to find out what they think, and to make explicit as well as unpack the complexity of their thoughts about a topic, even if they don’t think they know much about the topic. This work will unfold in groups of three: interviewee, interviewer, and observer

* Instructor Presentation: Memory (a prototype presentation to be used as a scaffold for group presentations that follow)
* Discussion: Fuster, J. (2009). Cortex and Memory: Emergence of a new paradigm. *Journal of Cognitive Neuroscience* 21(11), 2047-2072.

**Assignment 2: Position Paper 2 Due Friday Oct 27th at midnight**

**Assignment 3: Group Projects Due Wed Oct 18th through Nov 9th**

**Meeting 6: Wednesday Oct 18th 2017 (Online 6:00 to 8:00 pm)**

**Group Project- Emotions**

* Reading 1: Damasio, A. R. (1996). The Somatic Marker Hypothesis and the Possible Functions of the Pre-frontal Cortex. *The Royal Society*. Volume 351, pp. 1413-1420.

<https://ahandfulofleaves.files.wordpress.com/2013/07/the-somatic-marker-hypothesis-and-the-possible-functions-of-the-prefrontal-cortex_damasio.pdf>

* Reading 2: [A rebuttal to the SMH] Maia, T.V. & McClelland, J.L.(2005). The somatic marker hypothesis: still many questions but no answers. Trends in Cognitive Sciences. 9(4), 162-164.

<http://stanford.edu/~jlmcc/papers/MaiaMcC05_TiCS.pdf>

* Reading 3: Dalgleish, T. (2004). Timeline: The emotional brain. *Nature Reviews Neuroscience 5*(7), 582-589.
* Reading 4: LeDoux, J.E. (2015). Feelings: What are they and how does the brain make them? Daedalus, the Journal of the American Academy of Arts & Sciences 144(1), 96-106. <http://www.cns.nyu.edu/labs/ledouxlab/pdf/daed_LeDoux_2015.pdf>
* Reading 5: Posner, M. & Rothbart, M. (2007). Ch 9, Expertise
* Visit Website: Paul Ekman (2014). The Atlas of Emotions <http://www.paulekman.com/atlas-of-emotions/>

**Meeting 7: Wednesday Oct 25th 2017 (Online 6:00 to 8:00 pm)**

**Group Project- Social Cognitive Neuroscience**

* Reading 1: Lieberman, M. (2007)
* Reading 2: Lieberman, M (2013). Social

**Meeting 8: Wednesday Nov 1st 2017 (Online 6:00 to 8:00 pm)**

**Group Project- Attention**

* Reading 1: Posner, M. & Rothbart, M. (2007). A mind of one’s own (Ch 4). *Educating the Human Brain.* American Psychological Association: Washington DC. 79-97.
* Reading 2: Bush, G., Luu, P., & Posner, M. I. (2000). Cognitive and emotional influences in anterior cingulate cortex. *Trends in Cognitive Sciences, 4*(6), 215-222.

**Meeting 9: Wednesday Nov 8th 2017 (Online 6:00 to 8:00 pm)**

**Group Project- Intelligence**

* Reading 1: Hawkins, J., & Blakeslee, S. (2004). *On Intelligence*.
* Reading 2: Posner, M. & Rothbart, M. (2007). Preparing for School (Ch10). *Educating the Human Brain.* American Psychological Association: Washington DC. 209-216.
* Discussion: Final Project: Design a MBE Curriculum (Due Mon Dec 12th)

**Assignment 4: Individual Presentation Due Saturday Nov 18th at 9 am**

**Meeting 10: Saturday Nov 18th 2017 (FACE to FACE 9:00 to 5:00)**

**Individual Presentations**

**Assignment 5: Final Project Due Friday Dec 8th at midnight**

**A Few Broader Issues**

**Attendance:** At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students’ academic performance, which includes establishing course-specific policies on attendance. My expectation is that you will alert me and your team members if you are unable to attend class for any reason.

**Professional Dispositions:** Each student/candidate in the College of Education at UTA will be evaluated on Professional Dispositions by the faculty and staff in each professional education course per semester. These dispositions are identified as essential for a highly-qualified professional. Instructors and program directors will work with students/candidates rated as “unacceptable” in one or more stated criteria. The student/candidate will have an opportunity to develop a plan to remediate any digressions. If digression(s) are not, or cannot be successfully remediated as in the case of an egregious digression, a determination will be made by Committee on continuation or dismissal from the College of Education.

**The College of Education Conceptual Framework** serves as a guide for our professional education programs. It highlights our commitment to excellence across courses and clinical experiences and reflects current research and alignment to professional standards. This document describes how we are dedicated to the development of highly skilled and ethical education professionals who are also intellectual and educational leaders. The UTA College of Education Conceptual Framework may be found at this link: <http://www.uta.edu/coed/about/conceptual-framework.php>

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/aao/fao/>).

**Disability Accommodations: UT** Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA),* and *Section 504 of the Rehabilitation Act.* All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the **Office for Students with Disabilities (OSD).** Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

**The Office for Students with Disabilities, (OSD)** [www.uta.edu/disability](http://www.uta.edu/disability) or calling 817-272-3364.

**Counseling and Psychological Services, (CAPS)** [www.uta.edu/caps/](http://www.uta.edu/caps/) or calling 817-272-3671.

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Title IX:** *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit*[*uta.edu/eos*](http://www.uta.edu/hr/eos/index.php)*. For information regarding Title IX, visit* [www.uta.edu/titleIX](http://www.uta.edu/titleIX).

**Academic Integrity:** Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents’ Rule* 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as “lecture,” “seminar,” or “laboratory” shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which I will point out. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

[http://www.uta.edu/police/Evacuation Procedures.pdf](http://www.uta.edu/police/Evacuation%20Procedures.pdf)

**Student Support Services**:UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at http://www.uta.edu/universitycollege/resources/index.php

**University of Texas at Arlington**

**College of Education**

**Conceptual Framework**



The conceptual framework of the UT Arlington College of Education was developed collaboratively and has evolved over time. Following the identification of a set of core values held by all involved in the preparation of candidates enrolled in the College, members of the University, PK-12 districts, higher education institutions, and area business and foundation communities worked together to develop a shared vision for education.

All activities in the College are guided by the premise that we are Partners for the Future, committed to fostering critical, creative thinkers prepared to engage meaningfully in a dynamic society. This premise is characterized and distinguished by three core values: Professionalism, Knowledge, and Leadership. Research, Diversity, and Technology are themes woven throughout each core value. The College mission, core values, and themes serve as the coherent thread running through all professional programs, guiding the systematic design and delivery of clinical/field experiences, course curricula, assessments, and evaluation. The Conceptual Framework consists of six interrelated and interacting components, which are viewed as essential contexts for the shaping of informed, skilled, and responsible partners:

* The first core value, **Professionalism**, represents the contention that candidates develop an expertise and specialized knowledge of their field. A high quality of work, standard of professional ethics and behaviors, as well as work morale and motivation are all necessary factors of a developed interest and desire to excel in job performance.
* The second core value, **Knowledge**, represents candidate theoretical or practical understanding of a subject. In today's world, candidate knowledge includes not only academic content mastery, but also skills such as critical thinking, communication, technology literacy, and collaboration, each required for success in college, life, and career.
* The third core value, **Leadership**, represents candidate ability to organize, assist, and support others in the achievement of a common task. Candidates develop and refine their leadership skills within the context of their interactions with PK-20 students, curricula, faculty, and other professionals. The additional three components of the model, Research, Diversity, and Technology, represent themes woven into the core values:
  + **Research** encompasses the investigation of ideas and theories with the purpose of discovering, interpreting, and developing new systems, methods, and support for knowledge, behaviors, and attitudes.
  + **Diversity** is an indispensable component of academic excellence. A commitment to diversity means a dedication to the inclusion, welcome, and support of individuals from all groups, encompassing the various characteristics of persons in our community such as race, ethnicity, national origin, gender, age, socioeconomic background, religion, sexual orientation, and disability.
  + **Technology** is emphasized throughout all programs and is used to support and improve content delivery and student learning.

All components lead to the achievement of one goal–the development of informed and responsible Partners for the Future–who are committed to fostering analytical, innovative thinkers prepared to engage meaningfully in a dynamic society.