



# Course Syllabus

SCI ED 5133-60 Workshop: Applications of Business and Industry in Science Education MATH

5133-60 Workshop: Applications of Business and Industry in Math/Math Education TECH

5133-60 Workshop: Applications of Business and Industry in Technology Education

**These are the numbers on your transcript to register please use the [Registration Handout](#)**

## Course Instructors

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## Credit

3 hours Graduate/Undergraduate Credit, awarded via University of Northern Iowa Continuing Education program.

## Course Description

Teacher Externships are opportunities where teachers are partnered with a workplace host in their community for 5-6 weeks in the summer, during which the teacher applies classroom content to projects completed for the host. Throughout the experience teachers will be exposed to new ways their content is applied in the workplace and what 21st Century Skills students need to be successful in today's workforce.

# Course Objectives

Teachers enrolled as students in the Externship course will:

- be immersed into a workplace environment where they will actively contribute to daily operations and share their experiences with the other externs via the discussion board;
- observe and reflect upon the 21st century skills today's students need to be a successful member of Iowa's workforce;
- describe the career guidance needed to assist students interested in STEM fields; ● reflect on how the content taught in their classroom is applied in today's workplace; and ● construct a project- or problem-based lesson or phenomena lesson incorporating the Externship experience into the classroom.

## Course Expectations

- Participation in: Introduction Meeting with business host and mentor prior to start of Externship, Orientation meeting in June, Four weekly online PLC meetings, and Externships Forum.
- A minimum of 200 hours and maximum of 240 hours worked at or for the Externship host.
- Submit hours worked on a weekly basis via form on Canvas.
- Complete four weekly Guiding Question responses via Canvas
- Submit an Externship description with photos within the first two weeks of the Externship. 6. Submit a final Project/Problem-Based Learning (PBL) **OR** Phenomena-based storyboard/poster.
- Participation in program evaluation.

## Course Assignments

- **Submitting hours worked**
  - Number of hours worked should be recorded **weekly** and **submitted monthly to IowaGrants**.
  - Report to the nearest 0.5 hr
- **Guiding Questions**
  - There will be four guiding questions to answer for four weeks in the summer (see next page for specific questions). Questions will be answered in a discussion format on Canvas with the option to respond to other teachers. There is no specific length for a response but answers should be well thought out and could easily be 1-2 paragraphs in length (or more).
- **4 PLC Video Meetings** (weekly video meeting,, arranged by PLC leader)
  - The focus will be to discuss the PBL format and guide participants in the creation of their project or problem based learning classroom experience.
- **Job Description** (due within **first week** of Externship via Canvas)
  - As thoroughly as possible describe the project(s) you will be working on with your Externship host. Do not include specific proprietary information, and please ask your host to review your description. Include your contributions and how they will benefit the host.
  - On-Site Photographs (due within the **first week** of Externship via Canvas)
  - Provide two or more *high quality* photographs working on the Externship site. No fuzzy, far away or low quality pics! We need to be able to see your face!
  - **Be sure to get approval of pictures from your host prior to submitting if required.**
- **Weekly Highlights**
  - These give an opportunity to share about the experience and offer reflections on what is being learned. These are also great weeks to post pictures from your experience.
  - Final storyboard/poster (due at the end of Externship, or by **July 21st** via Canvas) ○ Provide a finalized storyboard explaining a problem- or project-based lesson or phenomena-based lesson. This will include information about the Externship host and a real-world project, problem, or

phenomena that could be encountered at the host. The lesson should be set up to align with class goals and potentially utilize the host as an evaluator of the final project or solution to the problem.

- Storyboards/posters will be shared with the business host and discussed at the Year-End Forum. After the Forum, the lessons will be compiled on the program's website for all to use as a resource.

- **Final Reflection**

- What was the most impactful or your favorite aspect of your Externship? What can we do to make it better?

## TEACHER EXTERN GUIDING QUESTIONS

The following Guiding Questions are to be reflected upon and discussed via Canvas. Program mentors will provide feedback to the posts and encourage continual reflection on how to bring the Externship experience back to the classroom. Externs will also respond to other teachers' posts, which facilitates discourse and collaboration, adding additional value to the Externship experience.

**GQ 1:** Based on your Externship experience so far, what 21<sup>st</sup>Century Skills (creativity, collaboration, communication, critical thinking) or "soft" skills are needed to be successful at your Externship site? What changes can you make in your classroom to emphasize building these skills to better prepare our students for the world of work? *Alternate GQ1 (For extern alums):* after your last Externship, did you make any changes in your classroom to help better prepare students for the world of work? Reflect on any observations you had on your student's 21st century capabilities after your Externship experience.

**GQ 2:** Keeping in mind the Iowa Core Science and Math standards, Next Generation Science Standards, and/or the Iowa Standards for Industrial Technology, what applicable content skills within your area do you see being regularly used or needed as background knowledge by employees at your host site? *Alternate GQ2 (For extern alums):* How did your last Externship come up in your classroom during the school year? This can range from formal PBL units to examples in class to informal conversations with students.

**GQ 3:** In the classroom, what is the balance between building the skills students need for jobs, careers, and the workplace, and teaching students the content and inspiring the love of learning? *Alternate GQ3 (For extern alums):* Did you change anything in your classroom after your last Externship to help students build workplace skills? How can we help students better enjoy the learning process?

**GQ 4:** How can we continue to build relationships between area workplaces and your classroom? What can you or your school do to engage students with the real world, and what can the real world (our Externship hosts) do to engage students in their world? Show your extern host the discussion board and perhaps it could be their week to contribute!

## Evaluation

As a teacher participating in the STEM Teacher Externships Program through UNI, we ask for your participation in our program evaluation. Any documented change in how STEM is taught and perceived by the teacher participants and/or their students as a result of the teacher's Externship participation adds great value to the program. Evidence of impact makes businesses much more likely to invest and become an Externship partner, and evidence comes from program evaluation.

You will be asked to complete a post-externship teacher questionnaire at the end of the Externship, and complete a possible end-of-semester teacher questionnaire at the end of the fall semester.

# Stipend Remittance

*\*Stipend for days worked for the host is NOT Applicable to externs being paid directly by Extern host\**

Remittance is conditioned upon a signed *Participant Stipend Agreement* and satisfactory completion of Externship and course expectations. The maximum total stipend is \$5,000.00, earned by working 240 hours at a rate of \$20/hr (\$4,800), as well as attendance at both the Orientation and Year-End Forum meetings (\$100 per meeting). Any days over this maximum will not earn stipend monies from the COUNCIL.

- a) The workplace stipend for time worked at or for the Externship Host is \$20/hour up to 240 hours.
- b) The meeting stipend for attending the Orientation and Forum meetings is \$100 for each meeting, or prorated amounts if EXTERN cannot attend the entire meeting.
- c) Teachers can be reimbursed for on-site attire required by the host according to the following guidelines:
  - i. Policy-mandated Personal-Protective Equipment (PPE)
    - o Steel toed boots with metatarsals will be reimbursed up to \$150.
    - o Steel toed boots will be reimbursed up to \$100.
  - ii. Externship-specific attire not related to daily use (example: waders or hip boots) o Footwear or attire needed to adequately perform the Externship will be reimbursed up to \$60.
  - iii. NOT reimbursed: Daily attire (example: khaki pants or hiking boots)
    - o General footwear and/or attire that is applicable to daily use will **NOT** be reimbursed.

Upon submission of an individual W9 Form and a monthly invoice via the IowaGrants.gov system utilizing the invoice template provided, stipend remittance will be made by the Iowa Department of Education (IDOE) on behalf of the Iowa Governor's STEM Advisory Council in three (3) installments for the months of June, July and August based upon the actual hourly accrual for each of these months. This monthly invoice may include the additional stipend for the Orientation in June based upon attendance, any approved equipment reimbursement and the Forum in July based upon attendance. A \$300 tuition scholarship will be paid directly to the University of Northern Iowa by the STEM Council for the course registration. Allowable mileage for the Year-End Forum may be submitted on a separate invoice through the IowaGrants.gov system.

The Iowa Department of Education shall make participant stipend payments and other allowable expense reimbursements in accordance with Iowa Code section 8A.514.

Direct deposit (EFT) payment is available and strongly encouraged. An IDOE direct deposit (EFT) form is available upon request.

## Taxes

Subject to change depending upon the IDOE protocol, FICA withholding or taxes are not expected to be deducted from the participant stipend. A Form 1099-INT will be issued by the IDOE and mailed to the provided address.