INTRODUCTION TO STEM PATHWAYS AND CAREERS

1. Materials

   Internet access, one-to-one computer use daily, and access to the LSU/BRBytes servers. Chromebooks will not work with the free Arduino software.

Reusable Hardware/Material	Recommended Unit	Cost/Unit
Various reusable material and hardware for projects	1 per classroom	$1,500
Consumables		
Various consumables for projects	1 per classroom	$500
Software		
Arduino IDE	1 per computer	Free on computer, $1/ month for chromebook

   *Complete supply list can be found [here](#).

2. Required software, networking access, and access to LSU/BRBytes servers
   - Students will need to sign up with online development and testing environments, including but not limited to codesandbox.io, jsfiddle.net, scratch.mit.edu and others.
   - Students will need access to YouTube instructional videos relevant to the course, as well as other educational video repositories.
   - Teachers will need to be able to access the LSU/BRBytes servers using several Internet protocols including but not limited to HTTPS and SSH.
   - Students and teachers will access the curriculum and teaching materials through the LSU and BRBytes servers, and through Google Drive.
   - Arduino software will need to be installed on computers. It is free to download on computers. There is a cloud based version that is also available but requires drivers to be downloaded and will not work on Chromebooks. There is also a Chrome App that can be purchased for $1/student per month (only required for one month). However, IT would have to install it on student chromebooks.
   - Teachers will need to share student data with their designated LSU Pathway Point-of-Contact.
   - Principals will need to communicate with the district's information technology department to ensure that there are no technological restrictions that block access to the LSU/BRBytes servers in the lsu.edu, brbytes.org or lsupathways.org domains on any port.In addition to the sites mentioned above, students will need web access to:

khanacademy.org	ericakochi.tumblr.com	www.oilfieldjobshop.com	www.hospitalitynet.org
Money.cnn.com	www.culinaryschools.org	Computer.howstuffworks.com	www.ada.org
brainpop.com	www.careerbuilder.com	peopleofcolorintech.com	petroleum.louisiana.edu
vimeo.com	blueprint.cs4all.nyc	www.coolmathgames.com	Catmediatheagency.com
www.kcs2019.com	En.scratch-wiki.info	www.mynextmove.org	www.raise.me
offices.omv.la.gov	www.w3schools.com	www.environmentalscience.org	Nurse.org

222 Prescott Hall • Baton Rouge, Louisiana • 70803
info@lsupathways.org • P (225) 578-6001• F (225) 578-4522 • www.lsupathways.org

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Gordon A. Cain Center

for Scientific, Technological, Engineering & Mathematical Literacy
Data and Technology Education Across all Disciplines

www.bls.gov	www.wlf.louisiana.gov	www.louisianabelieves.com	study.com
www.ucas.com	www.careerexplorer.com	Bigfuture.collegeboard.org	www.teacher.org
kizoa.com	www.edumaritime.net	www.beautyschoolsdirectory.com	www.belltec.com
wevideo.com	masafetyservices.com	crypto.interactive-maths.com	Doc.louisiana.gov
www.nicholls.edu	www.sowela.edu	www.ebi.ac.uk	www.lsp.org
www.fletcher.edu	www.archdaily.com	study.com	www.hvacclasses.org
www.bpcc.edu	Thebestschools.org	Animaker.com	www.careerexplorer.com
weebly.com	www.housecallpro.com	airandspace.si.edu	GoFormative
wix.com	Arduino.cc	www.teachersoftomorrow.org	band.us app

3. <u>Required teacher collaborations</u>
   Teachers will communicate with LSU instructors via emails, apps hosted on the LSU/BRBytes servers, and the band.us app.

4. <u>Required administration of course content, pre/post test, and research instruments</u>
   All required materials and instruments will be either posted in the LSU/BRBytes servers or their location announced via email with the teacher/instructor group for this course.

5. <u>Course Work</u>
   Teachers must present the course material in sequence or as approved by collaboration with the LSU Pathway Point-of-Contact. In the fall semester, teachers will report post-test results for each unit to the Point-of-Contact. In the spring semester, the teacher is responsible for utilizing the LSU/BRBytes servers based system to release, acknowledge, provide student feedback, and grade student work. The LSU/BRBytes servers will track and notify the teacher as students near the required 75% attainment mark for certification.

6. <u>Other</u>
   As this is a project-based learning class, we strongly suggest that each section of the course be limited to a *maximum* of 25 students. The course is dependent on the teacher providing feedback and reviewing student code. The course requires that teachers have adequate time to interact with each student.

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