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2022-2023 LSU STEM PATHWAYS PROGRAM

Elementary School | Middle School | High School

Benefits to Offering a BESE-Approved LSU Pathways Course at Your Middle School or High School		
Students	**Teachers**	**Districts**
• Earn LSU Pathway Certificates and Industry Based Credentials • High-Quality, Project-Based Courses • Dual Enrollment opportunities (HS only) • Opportunity to apply for Scholarships at LSU	• No high-stakes testing • Opportunity to participate in various grant funded STEM education research projects • Access to a minimum of six free Community of Practice sessions[1] • Access to substantial LSU graduate tuition scholarships and support programs	• Up to $400 in CTE/CDF funding per student per seat (up to $159 if taken in middle school) • SPS points for Industry Based Credentials and Dual Enrollment • High school credit in middle school

Benefits to Offering Elementary Modules and Middle School STEM Feeder Courses at Your School		
Students	**Teachers**	**Districts**
• STEM interest begins early in the educational journey • Fun and engaging STEM courses and learning modules	• Exciting curriculum based on project-based learning • Job security teaching high demand, high skill content • Access to a minimum of six free Community of Practice sessions	• Vertical alignment of STEM curriculum with high school pathways • Recruiting tool for your district and schools

In order to qualify for the benefits listed above, the LSU STEM Pathways courses must be taught by a teacher who has been certified by LSU. Teachers for elementary, middle, and high school courses can become certified to teach a specific Pathway course by attending the **2022 LSU Pathways Virtual Summer Training Institute** which will be offered in two sessions:

Session 1: JUNE 6 - JUNE 21 and **Session 2: JUNE 22 - JULY 8**.

See the next page for more information about the Virtual Summer Training Institute

[1] LSU provides support for first-year pathway teachers by hosting at least six course-specific Community of Practice (CoP) sessions assisting with course implementation issues. CoP teacher stipends will be determined and paid for by the districts.

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VIRTUAL SUMMER TRAINING INSTITUTE INFORMATION[2]	
Session 1: JUNE 6- JUNE 21 **Session 2: JUNE 22 - JULY 8**	$1,920 per course section[3]

In addition to the training registration fee, schools/districts are encouraged to pay a teacher a stipend for attending the training using CDF funding. Registration fee waivers, tuition waivers, and stipends may be available for selected schools and/or teachers participating in the Summer Training Institute courses. Please email stempathways@lsu.edu to request information regarding your eligibility.

Requirements to Participate in the Summer Training Institute	
Schools/ District	• Complete and return the **Memorandum of Understanding** by April 15th in which the school agrees to: ○ Offer the course(s) in 2022-23 ○ Provide necessary technology and other required course materials ○ Pay $96 administrative fee[4] to LSU for each high school student enrolled in an LSU STEM Pathway Course (See below for **rebate** on administrative fee!)
Teachers	• If not trained previously, you are required to attend training for your LSU STEM Pathway course • No content-specific prior knowledge required (details in Course Catalog)[5] • Strong work ethic and a desire to engage in project-based learning • Reliable internet access and computer to be able to actively participate during synchronous portions of training[6]

A catalog of training courses offered at the 2022-23 Summer Training Institute can be found here! A detailed schedule of training times is on the following pages.

Certification Fee REBATE	
Eligibility for REBATE: 1. Return the MoU by May 1st AND 2. Have a **teacher** trained in a Pathways course this summer AND 3. Have that teacher teach the course in 2022-23	**REBATE OFFER:** Up to 20 certification fees **FREE*** for each training section attended!!! *That's **$1,920** in free certification fees for a 1 section training or **$3,840** for a 2 section training!!

[2] Some summer training courses can be taken for graduate credit with a full tuition scholarship (course fees have to be paid by participants or their schools). Participating teachers who want to receive graduate credit must enroll in the LSU Graduate School by May 1, 2021. If you are interested in receiving grad credit, please send a brief email to stempathways@lsu.edu.
[3] Some courses require two sections for complete training and CTE/CDF course eligibility.
[4] Administrative fee covers: enrollment and course access, student certification, and course support for teachers and students.
[5] Although prior STEM experience is a plus, many successful STEM Pathway teachers had no prior STEM background.
[6] If a teacher does not have access to either a device/internet, the school is responsible for providing it.

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Will you be offering an LSU STEM Pathway course in 2022-23? Please complete a Memorandum of Understanding!!!

STEP 1: Review our course offerings in the LSU STEM Pathways Course Catalog and review the training schedule below to determine which courses you want to offer at your school in 2022-2023.

Step 2: On March 15th, the 2022-23 Memorandum of Understanding (MoU) will be emailed to all interested schools. If you do not currently offer a pathways course and would like to receive this email, please send an email to stempathways@lsu.edu to be included on the email list.

Step 3: All new **AND** returning schools should complete the MoU by April 15th!

STEP 4: After LSU receives the MoU, teachers who need to be trained will be provided a training confirmation email containing further details.

For questions about the Summer Training Institute & MoU, please send an email to stempathways@lsu.edu.

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LSU STEM CERTIFICATION PATHWAYS: VIRTUAL 2022 SUMMER TRAINING INSTITUTE

Session 1: June 6th - June 21st Session 2: June 22rd - July 8th

- We will be offering this year's summer training for the LSU STEM Pathways in a 100% virtual setting, with some hybrid (face-to-face and virtual) Saturday workshops available in Fall 2022 and Spring 2023.
- Each course offers synchronous online meetings which will occur at different points each day.
  - "AM Synchronous" means that synchronous instructional times will occur between **8 AM - 1 PM**
  - "PM Synchronous" means that synchronous instructional times will occur between **12:00 PM - 5:00 PM**
  - Each pathway will have daily synchronous group meetings from **12 PM to 1 PM** to share information with teachers from both the AM and PM course sections
- Assignments and asynchronous materials will be required to be completed between each synchronous online meeting; details will be provided to you during each section.
- Trainings listed in yellow or blue require only a single session for complete training. Trainings listed in green require two sessions for complete training.
- **We have done our best to provide accurate training dates and times for each course. However, training sessions and times are subject to change.**
- Some training sessions can be taken as part of a graduate course for graduate credit. These courses are denoted with a 🎓.

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BIOMEDICAL SCIENCES

Session I (12 days) **M 6/6 - F 6/10, M 6/13 - F 6/17, M 6/20 - T 6/21**	**Session II (12 days)** **W 6/22 - F 6/24, M 6/27- F 7/1, T 7/5- F 7/8**
Introduction to Biomedical Sciences (AM Synchronous) No Prerequisites	**Comparative Anatomy & Physiology** (AM Synchronous) No Prerequisites
Forensics (AM Synchronous) No Prerequisites	
By request we can schedule individualized training for **Senior Biomedical Capstone.** (Sessions 1 & 2: times dependent on participants) For select teachers only; inquire as to suitability.	

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COMPUTING	
Session I (12 days) **M 6/6 - F 6/10, M 6/13 - F 6/17, M 6/20 - T 6/21**	**Session II (12 days)** **W 6/22 - F 6/24, M 6/27- F 7/1, T 7/5- F 7/8**
Survey of Computer Science (AM Synchronous) No Prerequisites	**Cybersecurity** (AM Synchronous) No Prerequisites
🎓**Introduction to Computational Thinking I (ICT)** (AM Synchronous + daily homework) No Prerequisites. Section II is required	🎓**Introduction to Computational Thinking II (ICT)** (AM Synchronous + daily homework) Prerequisites: ICT Section I
🎓**Data Manipulation and Analysis I (DMA)** (AM Synchronous) Prerequisite: ICT, Section II of DMA is required	🎓**Data Manipulation and Analysis II (DMA)** (AM Synchronous) Prerequisite: ICT, Section I of DMA
Interactive Computing (INCO) is available on request to teachers who have taught at least two programming courses (ICT, DMA, PRG). It requires two sessions.	
Programming for STEM (PRG) is available on request to teachers who have taught at least two programming courses (ICT, DMA, INCO). It requires two sessions.	

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DIGITAL DESIGN & EMERGENT MEDIA

Session I (12 days) **M 6/6 - F 6/10, M 6/13 - F 6/17, M 6/20 - T 6/21**	**Session II (12 days)** **W 6/22 - F 6/24, M 6/27- F 7/1, T 7/5- F 7/8**
🎓**Sound Design** (AM Synchronous) No Prerequisites	🎓**Digital Storytelling** (AM Synchronous) No Prerequisites
🎓**Digital Image** (AM Synchronous) No Prerequisites	🎓**Motion Graphics** (AM Synchronous) No Prerequisites
🎓**Interactive Media Capstone** (AM Synchronous) No Prerequisites	🎓**Advanced Film and TV Production** (AM Synchronous) Pilot (Prerequisites : Basic Film & TV Production)
🎓**Basic Film and TV Production Section 1** (AM Synchronous) No Prerequisites, Section 2 is Required	🎓**Basic Film and TV Production Section 2** (AM Synchronous) Prerequisites: Section 1
🎓**Programming Digital Media Section 1** (AM Synchronous) No Prerequisites, Section 2 is Required	🎓**Programming Digital Media Section 2** (AM Synchronous) Prerequisites: Section 1
🎓**Coding for the Web Section 1** (AM Synchronous) No Prerequisites, Section 2 is Required	🎓**Coding for the Web Section 2** (AM Synchronous) Prerequisites: Section 1
By request we may be able to offer Digital Storytelling in Session 1.	

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PRE-ENGINEERING	
Session I (12 days) **M 6/6 - F 6/10, M 6/13 - F 6/17, M 6/20 - T 6/21**	**Session II (12 days)** **W 6/22 - F 6/24, M 6/27- F 7/1, T 7/5- F 7/8**
🎓**Intro to Engineering** (AM Synchronous) No Prerequisites	**Engineering Design and Development** (AM Synch.) No Prerequisites (Includes IBC opportunity)
🎓**Intro to Robotics** (AM Synchronous) No Prerequisites	**Pilot: Survey of Drones** (AM Synchronous) No Prerequisites (Includes IBC opportunity) For select teachers only; inquire as to suitability.
Advanced Robotics VEX (PM Synchronous) Corequisite or Prerequisite: Intro to Robotics Focus is on VEX Competitions	**Principles of Engineering** (PM Synchronous) Prerequisite: Intro to Engineering
Engineering Economy (PM Synchronous) (strong math background preferred)	**Engineering Design and Development Abridged Training for teachers already certified in Inventor** (PM Synchronous, during the week of June 27-July 1) Requires PC, *Special cost $960 instead of $1920 as session is abbreviated

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MIDDLE SCHOOL COURSES AND ELEMENTARY MODULES

Session I (12 days) **M 6/6 - F 6/10, M 6/13 - F 6/17, M 6/20 - T 6/21**	**Session II (12 days)** **W 6/22 - F 6/24, M 6/27- F 7/1, T 7/5- F 7/8**
Step Into STEM 6th (AM Synchronous) No Prerequisites	**Intro to Computing 6th** (PM Synchronous) No Prerequisites
Introduction to STEM Pathways and Careers (7th/8th) (PM Synchronous + daily homework) No Prerequisites, Basic Career Readiness Course	**Elementary Cohort Module Training PK-5** (AM + PM Synchronous) No Prerequisites
Survey of Computer Science (8th/9th) (AM Synchronous) No Prerequisites	**Elementary Cohort Module Training- Year 2 PK-5** (PM Synchronous) No Prerequisites , For Select Teachers Only
	Middle School Cohort Module Training 6-8 (AM + PM Synchronous) No Prerequisites, For Select Teachers Only
Aquaponics Pilot 6th Session and Time TBD No Prerequisites For Select Teachers Only; Inquire for Suitability	


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