EdReady Math to Support Career and Technical Programs

Thanks for joining us! We will begin promptly at 2pm ET.

- Use the “questions” area to submit questions as they arise
- This webinar will be archived at NROCnetwork.org
- Follow us at #NROCPd

Need help accessing? Please email: memberservices@NROC.org
As a non-profit organization, **NROC partners with educators to create open and low-cost courses and tools** that are designed to recognize every student’s unique learning needs and preferences.

These resources can be adapted and scaled to meet programmatic goals in a variety of instructional settings.
WHAT WE OFFER

**NROC COURSES**
Media-Rich, Learner-Centered, & Pedagogically Diverse

**NROC MATH**
- Algebra 1
- Developmental Math

**NROC ENGLISH**
- Developmental English

**WEB-BASED TOOLS**
Open and Designed for Institutional Customization

**EdReady**
a readiness system (to personalize a learner’s study path)

**Hippo Campus**
a curated repository of learning objects

NROC courses can be installed in a Learning Management System (LMS)...

or can be accessed through our web-based tools
EdReady

EdReady is a math and English readiness system that employs a knowledge inventory to personalize a learner’s path to subject mastery within the context of a specific educational goal.
WEB-BASED TOOLS
Open and Designed for Institutional Customization

What do you want your students to be ready for?

Goals
Create goals that are meaningful to your students.

Scope
You can tailor study paths and embedded diagnostics to support programmatic needs within a customized scope of expectations.

Resources
Select and prioritize content interventions.

Data Access
Access data for planning and evaluation.

Readiness
Customize messaging to let students know what is next.
Math Bridge Program
at
St Philip’s College, Southwest Campus
San Antonio, TX

Paula Englebert
Math Lab Coordinator
St. Philip’s College, Texas
St. Philip’s College, San Antonio, TX

Established in 1898, St Philip’s is one of the oldest and most diverse community colleges in the nation, and is the only college to be federally designated as both a historically Black college and a Hispanic-serving institution.

The Southwest Campus was added to the college in 1987 as a hub for technical training programs.

St Philip’s currently offers over 120 workforce degree and certificate programs, as well as academic degrees and transfer degrees to 4 year institutions.
St. Philip’s Student Population

• Early college high school students
• Adult learners
• Traditional college students
• Certificate level 1 and level 2 programs
• AAS degree plans
• AS and AA degree plans
• Transfer students
• Job and Vocational Training – workforce and Continuing Education
• Transient students
• Students from other Alamo Colleges
Why did we begin our journey with NROC?

Observations

• Students have demonstrated poor math skills in Applied Science classes – mostly basic or foundational mathematics
• Students often put off any math course needed until their last semester, even though it supports their other classes, so they need a refresher along the way
• Some are exempt from having to take a math class or the math portion of the placement assessments

Consequences

• Students are often unable to do basic tasks in applied science classes
• Instructors can become overburdened re-teaching math skills in addition to course specific skills, or providing additional tutoring
• Successful completions of courses with A, B, or C (Productive Grade Rate (PGR)), and retention rates were affected
Collaborative effort between the Applied Science Division and the Mathematics Department to provide Academic Support to students earning Certificates or in Associates of Applied Science Degree Programs at St Philip’s College

*Competency and Confidence* in mathematics in students

**MATH BRIDGE PROGRAM**
Programs identified as needing support

- Construction Technology
- Autobody/Collision
- Plumbing
- Culinary Arts
- Auto Tech/Diesel
- Electrical programs
- Welding Technology
- Advanced Manufacturing
- HVAC/Refrigeration
- Aircraft Technology
- Manufacturing Program
Specific Courses targeted

ABDR 1307, 1419, 1431
AERM 1208, 1315
CETT 1409
CHEF 1301
CNBT 1301, 1400, 1416
DEMR 1401
ELMT 1305
ELPT 1411, 1429
HART 1403, 1405, 1407
MCHN 1302, 1426, 1438
PFPB 1413, 1450
TECM 1343
WLDG 1313, 1425, 1428, 1430
Get ready for college math and career

EdReady lets you test yourself in math, then helps you with a customized study path. If you're thinking about what's next for college and career, be smart and know your options.

Get Started

As you get started, you may find the following information helpful:
### Content comparison between EdReady Units and skills needed for entry into College level courses.

| Graphing | | | |
|---|---|---|---|---|
| Unit/Lesson | | 1414 prep included? | 1314 prep included? | 1332 prep included? | Phoenix cert included? |
| Graphs and Applications | The Coordinate Plane | Yes | Yes | Yes | No |
| Graphs and Applications | Graphing Linear Equations | Yes | Yes | Yes | No |
| Slope and Writing the Equation of a Line | Finding the Slope of a Line | Yes | Yes | No | No |
| Slope and Writing the Equation of a Line | Writing the Equation of a line | Yes | Yes | Yes | No |
| Slope and Writing the Equation of a Line | Parallel and Perpendicular Lines | Yes | Yes | Yes | No |
| Slope and Writing the Equation of a Line | Graphing Linear Inequalities | Yes | Yes | Yes | No |
| Systems of Equations and Inequalities | Graphing Systems of Equations and Inequalities | Yes | Yes | Yes | No |
| Systems of Equations and Inequalities | Graphing Systems of Linear Equations | Yes | Yes | No | No |
| Algebraic Methods to Solve Systems of Equations | The Substitution Method | Yes | Yes | No | No |
| Algebraic Methods to Solve Systems of Equations | The Elimination Method | Yes | Yes | No | No |
| Systems of Equations in Three or More Variables | Solving Systems of Three Variables | Yes | Yes | No | No |
| Rational Expressions | Operations with Rational Expressions | Introduction to Rational Expressions | Yes | Yes | No | No |
| Rational Expressions | Operations with Rational Expressions | Multiplying and Dividing Rational Expressions | Yes | Yes | No | No |
| Rational Expressions | Operations with Rational Expressions | Adding and Subtracting Rational Expressions | Yes | Yes | No | No |
| Rational Equations | Operations with Rational Expressions | Complex Rational Expressions | Yes | Yes | No | No |
| Rational Equations | Solving Rational Equations and Applications | Yes | Yes | No | No |
| Formulas and Variation | Logarithmic and Exponential Equations | Yes | Yes | No | No |
| Mathematical Modeling with Probability | Logarithmic Functions | Yes | Yes | No | No |
Customizing the scope within EdReady to include faculty requested items
Once registered in MATH 0065, students access the Math Bridge modules directly through CANVAS.

No extra websites, usernames or passwords to remember.

Self-paced guided modular course, offered online OR in a lab

The student drives!
Students only have to click the button on the assignment screen to automatically log them into EdReady so they can work on their study path.
Q: STUDENT PERCEPTIONS

Has Bridge had a positive effect on student confidence and skill levels?

STUDENT SURVEY

At the end of the semester, students completed a brief survey. Approximately 1/4 of Bridge Participants completed the survey (by Dec 10) with the following findings:

- Has your attitude towards math changed?
  - Yes, positively: 56%
  - Yes, negatively: 6%
  - Did not change: 38%

- Do you feel more confident when math comes up in your coursework?
  - Yes: 69%
  - No: 31%

- Do you feel your skills have increased in mathematics?
  - Yes: 63%
  - No: 38%

Testimonial “I thought this was going to be a waste of time, but when I started doing the assessment I realized how much I had forgotten. It did not take long to get through the entire program and it was definitely worth it as a refresher. I needed it”

Collin W - Fall 2016
Percentage of those that passed their associated trades courses successfully (with an A, B or C)

<table>
<thead>
<tr>
<th></th>
<th>Fall 2016</th>
<th>Spring 2017</th>
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</thead>
<tbody>
<tr>
<td>Waived/Exempted from Bridge Program</td>
<td>92.8%</td>
<td>86.6%</td>
</tr>
<tr>
<td>Required and Completed Bridge</td>
<td>94.4%</td>
<td>92.3%</td>
</tr>
<tr>
<td>Did not complete Bridge</td>
<td>81.8%</td>
<td>70.7%*</td>
</tr>
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</table>

*Spring 2017:
Those that did not participate passing with A,B,C at rate of **60.6 %**
Those that began Bridge, but did not complete passing their linked course with A,B,C at rate of **82%**
What’s next for EdReady at St. Philip’s

• Highly specialized mini courses, topics or units with specific content offered in a modular or workshop format
• Access to EdReady upon registration for various college MATH courses in order for students to practice and solidify their own skillset
• Expansion of the Math Bridge Program to support additional trades or vocational programs of study
• Early College High School will be participating in the EdReady Program
• Job Based training programs, such as TXFAME, are potentially going to use EdReady beginning Summer 2018, as part of the Math Bridge program, to ensure students meet college ready requirements for entry into the programs.
EdReady Math to Support Career & Technical Programs

NROC Webinar March 29, 2018

Shelby Jansen
Math Faculty
WSU Tech, Kansas
We Are…

Est. 1965

WSU Tech (formally Wichita Area Technical College) is a different kind of college, changing lives by training people for high-wage, high-demand jobs. We work hand-in-hand with employers to determine their job needs now and into the future so our students graduate with the right skills.
a Community AND Technical College!

100+ degree & certificate programs

Aviation
Healthcare
Manufacturing
Business
Police Science
Design
IT
Growth

Enrollment Trend Data
Unduplicated Head Count

45% increase!

<table>
<thead>
<tr>
<th></th>
<th>FA15</th>
<th>SP16</th>
<th>SU16</th>
<th>FA16</th>
<th>SP17</th>
<th>SU17</th>
<th>FA17</th>
<th>SP18</th>
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<tbody>
<tr>
<td>High</td>
<td>1283</td>
<td>1559</td>
<td>138</td>
<td>1349</td>
<td>1824</td>
<td>108</td>
<td>1563</td>
<td>1932</td>
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<tr>
<td>Adult</td>
<td>1959</td>
<td>1789</td>
<td>992</td>
<td>2243</td>
<td>2197</td>
<td>1170</td>
<td>2704</td>
<td>2764</td>
</tr>
</tbody>
</table>

Careers start here.
NROC timeline

- **FA14**: Discover NROC
- **SP15**: Meet NROC
- **SU15**: Join NROC
- **FA15**: Hippocampus Playlists
- **SP16**: Member Meeting
- **FA16**: EdReady in AMT & AVC
- **SP17**: Member Meeting
- **FA17**: Re-Design online Dev Math
- **SP18**: Implement Re-Design MTH020

*Careers start here.*
NROC @ WSU Tech – Test Prep/Resources

Student Resources
- Hippocampus – Playlists for Intermediate & College Algebra courses
- EdReady – Basic Trigonometry for Physics students

Test Prep
- EdReady – College Algebra Pre-Req for Dual Credit High School students
- EdReady & Hippocampus – Currently working with testing/tutoring
NROC @ WSU Tech – Curriculum

General
• *EdReady* – Review Module for online College Algebra
• *EdReady* – Dev Math courses for Alternative High School
• *NROC English* – Pilot curriculum for Reading/Writing combo course

General & Technical
• *EdReady & NROC Dev Math* – online Dev Math Re-Design

Technical
• *EdReady* – Bridge Course for accelerated GED students at NexStep Alliance
• *EdReady* – Math Fundamentals course for Sheetmetal Assembly
• *EdReady* – Contextualized Math for Aviation Maintenance Technology Airframe and Power plant (AMT)
Curriculum Connection

Sheet-metal

GED Bridge

DevMath ReDesign

AMT Math

Careers start here.
Contextualized Math: Overview

AMT 105
Technical Math

AMT 109
Physics

AMT 113
Basic Electricity

AMT 107
Aircraft Drawings

EdReady used concurrently during AMT Session 1 courses!

Careers start here.
Contextualized Math: Team-Teaching

Technical Instructor
- Primary instructor for AMT109, AMT113, AMT107
- Support instructor for AMT105
- Delivers program-specific curriculum
- Provides & Facilitates EdReady work-time

Math Instructor
- Primary instructor for AMT105
- Support (JIT) instructor for AMT109, AMT113, AMT107
- Delivers foundational math curriculum
- Provides & Facilitates EdReady work-time
- Monitors student progress in EdReady

Careers start here.
Re-Design: Overview

**ABSORB**
- Activities that provide learners with new subject matter to begin the learning process.
- E-Text, TutorSim, Problem Solving Strategies Playlist, Learning Topics Playlist, Glossary

**DO**
- Activities that provide learners opportunities to apply and practice new knowledge.
- EdReady Study Path, Diagnostic Analysis, Discussion Boards, Checkpoints, Padlets, Puzzles and Games

**CONNECT**
- Activities that provide learners opportunities to demonstrate comprehension of knowledge.
- Problem solving, Performance Tasks, Quizizz, Practice Unit Tests, Unit Tests
EdReady Goal

Individual Unit Scopes

- AY18 WATC Unit 1 Whole Numbers
- AY18 WATC Unit 2 Fractions and Mixed Numbers
- AY18 WATC Unit 3 Decimals
- AY18 WATC Unit 4 Ratios Rates and Proportions
- AY18 WATC Unit 5 Percents
- AY18 WATC Unit 6 Measurement
- AY18 WATC Unit 7 Geometry
- AY18 WATC Unit 8 Concepts in Statistics

AY18 WATC MTH020 Math Fundamentals

- More Info
- Go to Goal
EdReady Initial Diagnostic & Study Path

EdReady Unit 2 Study Path

This Learning Module item should open in a new window. If not, then click the link below.

Click to Launch

Once you have completed the initial diagnostic assessment, you will want to work through your Study Path so that you can get the highest score possible. The target score is 90%, however you are encouraged to continue working and obtain 100%!

- Complete the initial diagnostic assessment to obtain your baseline score.
- Work through your Study Path until the due date or until you have obtained the target score or your desired score.

Your instructor will look at your overall EdReady Unit 2 score at the specified due date and transfer that score to the BlackBoard gradebook. You may continue working past the due date to improve your EdReady score, however your grade in BlackBoard will not be adjusted.
EdReady Initial Diagnostic Analysis

**QUESTION 10**

Subtracting Fractions and Mixed Numbers
- Not Ready
- Needs Improvement
- Mastered

**QUESTION 11**

My plan for reaching the target score is...

*(Be sure to use complete sentences in your response!)*
EdReady Checkpoint

**QUESTION 1**

My NEW and IMPROVED EdReady score is

**QUESTION 2**

My EdReady personal target score for this module is

**QUESTION 3**

My plan for reaching my personal EdReady target score is...
Problem Solving “Pick 5”

#4 – Machine

A bar 14 $\frac{5}{16}$ in. long is cut from a piece 25 $\frac{1}{4}$ in. long. If $\frac{3}{32}$ in. is wasted in cutting, will there be enough left to make another bar 10 $\frac{3}{8}$ in. long? Why or why not?

Students are given 10 problems that relate to a trade. This particular module has problems that address welding, automotive, machining, health, and carpentry.
Assessment: Test

Take Test: Module 2 Test

**Test Information**
- Description
- Instructions: Multiple Attempts Not allowed. This test can only be taken once. Force Completion Once started, this test must be completed in one sitting. Do not leave the test before clicking Submit.
- Question Completion Status:

**Question 1**
What fraction represents the shaded part of the circle?

- a. $\frac{12}{7}$
- b. $\frac{12}{5}$
- c. $\frac{7}{12}$
Assessment: Performance Task

Problem: A moving company is hired to take 578 clay pots to a florist shop. The florist will pay the moving company a $200 fee, plus $1 for every pot that is delivered safely. The moving company must pay the florist $4 each for any pots that are lost or broken. If two pots are lost, four pots are broken, and the rest are delivered safely, how much should the moving company be paid?

Important information:

Problem Solving Strategies: I will use...
- Draw a Picture
- Look for a Pattern
- Work Backwards
- Act it Out
- Other:

What are you trying to find?
GED Bridge Course

College Readiness
- Better Money Habits (BOA)
- Financial Aid
- Time Management
- Goal-Setting

Problem Solving
- Contextualize
- Real World
- Reasoning
- Communicate
- Collaborate

Test Preparation
- Sheet Metal – test out of Math
- AAS or AA – test into credit bearing math course

Careers start here.
MTH020 Math Fundamentals for Sheet Metal cohorts

EdReady Dev Math Units 1-8 + Pick 5 Problem Solving = Condensed MTH020 in 8-weeks!

Careers start here.
What’s Next?

Re-design Traditional Dev Math

Expand CTE/Academic Math partnerships!

Explore integrating EdReady English!

Shelby Jansen
Lead Faculty Mathematics & Academic Transitions Facilitator | sjansen@watc.edu

Southside Education Center
4501 E. 47th St. S | Wichita, KS 67210
Tel 316.677.1500 | www.WATC.edu
Questions?

Paula Englebert  
Math Lab Coordinator  
St. Philip's College, Texas

Shelby Jansen  
Math Faculty  
WSU Tech, Kansas

NROC.org
NROC collaborates with educators to imagine, develop, test, & refine technologies that improve student success.
Special thanks to our presenters!

Paula Englebert, St. Philip’s College, penglebert@alamo.edu

Shelby Jansen, WSU Tech, sjansen@wsutech.edu

Continue the conversation on social media using #NROCpd.

Access the archived webinar at NROCnetwork.org

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