Intermediate microeconomic courses can be a formidable obstacle to potential economics majors with less-developed skill sets (e.g., some who are Pell-eligible, first-generation, or from high schools without AP courses). The BRIDGE program assists such students by way of a three-week, end-of-summer “boot camp” that shores up fundamental quantitative skills, covers theoretical essentials, and prepares students for long-run success in the major. In this session we will ponder the challenges of identifying & attracting the desired set of students, determining what material to cover (and how to cover it), pondering how many tricks of the trade to share, managing teaching assistants, and assessment.
About
Weinberg's summer BRIDGE program prepares incoming students and rising sophomores for success in rigorously quantitative disciplines such as chemistry and economics. Students who attended high schools with limited or no AP preparation or who are among the first in their family to attend college are especially encouraged to apply. The program is free to attend.

Dates
First-year students - BRIDGE I for incoming Weinberg students who have just graduated from high school runs from August 8, 2016 to September 9, 2016. Move-in day is Sunday, August 7, 2016.

Overview

First-year BRIDGE students come to campus five weeks before Wildcat Welcome, take a two-week course in quantitative reasoning (taught by Prof. Eric Zaslow and Prof. Santiago Canez), followed by either a two-week course geared to problem-solving in chemistry (taught by Prof. Fred Northrup), or a two-week course emphasizing problem solving in economics (taught by Prof. Scott Ogawa). Students spend the final week of the program working on team projects and meeting individually with Weinberg College Advisers. Upon successful completion of the program, BRIDGE participants receive two academic credits, one for MATH 100-BR "Quantitative Reasoning" and a second for either CHEM 100-BR "Problem Solving in Chemistry" or ECON 100-BR "Problem Solving in Economics".

Rising sophomores in BRIDGE II come to campus one month before Wildcat Welcome and take either a three-week course for organic chemistry preparation (taught by Prof. Owen Priest) or a three-week course geared towards preparation in advanced economics (taught by Prof. James Hornsten). Sophomores spend the final week of the program coaching first-year students and meeting individually with Weinberg College Advisers. Upon successful completion of the program, BRIDGE II students will receive a single credit in either CHEM 199 "Preparation for Organic Chemistry" or ECON 199 "Preparation for Advanced Economics".

Co-curricular activities

In addition to working closely with faculty members and undergraduate tutors in the classroom, BRIDGE students attend workshops on topics such as study skills, stress management, advising support, and other aspect of college life that are different from high school. Evenings and weekend activities will include BBQs, trips to Chicago, movie nights, and other fun events.

My focus: BRIDGE II, preparation for ECON 310-1, micro theory, “the Orgo of ECON”
How will I get there? Where will I live?

If you live more than 90 miles from Chicago, BRIDGE will cover the cost of airfare to the program. Room and board is free for the entire five weeks of the program and any instructional materials for the program will be provided. A few days before Wildcat Welcome begins, students will move into their fall-quarter housing giving them a few days to get settled before the rest of the first-year class arrives. BRIDGE is a residential program, so all participants are required to live on campus with their classmates during the program. Other benefits include:

1. Preferred admission into NU Bioscientist, our research preparatory program for first-year students.
2. Participation in our textbook loan program during the academic year. Textbooks will be loaned, free of charge, for the following courses: CHEM 101, CHEM 171, CHEM 210 (212), MATH 212-234, ECON 201, ECON 202, ECON 310.

How do I apply?

1. Incoming first-year students: Complete the online application here. Students will be enrolled on a rolling basis until the end of May, so apply early for your best chance at being accepted.
2. Rising sophomores: Applications will open on February 15, 2016. Complete the online application here. Students will be accepted on a rolling basis. If you are accepted, you will be required to complete ECON 201/202 or CHEM 101-103/CHEM 171-172 before August 2016 to ensure your admission to the program. You will also be expected to enroll in ECON 310 or CHEM 210/212 in 2016-17. If you are not accepted in the first round, you will be notified if you are on the waitlist for the program.
Student Incentives to Attend

**BENEFITS**

- Community = support group of peers
- Increased Pr[pass core micro theory course]
- 1 course credit toward graduation
- Free room & board (all BRIDGE students live in same res hall)
- Airfare to program for students 90+ miles away
- Textbook loan ($200 book)
- Extracurricular events (e.g., trips to Chicago)
- Get to know faculty; advising
- Moving assistance

**COSTS**

- Opportunity: 3 weeks of summer time forgone (Job? Family & friends?)
- Other typical moving & living expenses

Top predictors of academic success: Relationship with faculty, Ability to ask for help, Community of peers
Attracting the Right Students

Target Audience

- Pell-eligible
- 1st generation
- High school didn’t offer AP (esp. math & econ)
- Struggled in ECON principles sequence (esp. micro)

Concern that we’ll attract those who are…

- Not planning to study ECON but interested in benefits
- A- students

Solutions:

- Application process with rolling admission
- Collaboration with ECON instructors (advertise in principles) and Admissions (screen for target audience; who expressed early quant interests?)
Optimization Problems

- **ACTOR:** College of Arts & Sciences Administration (deans)
- **OBJECTIVE:** Better outcomes for underrepresented groups
- **CHOICE(S):** Program design details
- **ENVIRONMENT/CONSTRAINTS:** Rules (credit, recruiting), Funding (staff, R&B, credit, textbooks), Staffing (appropriate ECON & CHEM instructors), Timing (after summer courses/research, before Wildcat Welcome)

- **ACTOR:** Instructor
- **OBJECTIVE:** Help students pass micro theory hurdle
- **CHOICE(S):** 3-week course design details
- **ENVIRONMENT/CONSTRAINTS:** Must fit within general program

**ECON 299BR: Foundations of Intermediate Microeconomics**
Audience Participation Time 😊

- Suppose YOUR department offers a course known for being a major hurdle for students. (Maybe you teach such a course.)
- You have 3 weeks to prepare students to pass this course. (Students have little to no background in the subject.)
  - 3 weeks = 15 weekdays
  - 1 weekday = morning (9AM–12PM), lunch break, afternoon (1–4PM), homework
  - 10 at-risk students
  - 1 teaching assistant (undergraduate or graduate, whatever seems feasible)
- Minimal departmental or administrative oversight, so you have a LOT of academic freedom on how to proceed.

- What will you cover?
- What would maximize your students’ Pr[success]?
- How will you allocate your time?
The Target Course & Textbook

ECON 310-1: Calc-Based Intermediate Microeconomics

<table>
<thead>
<tr>
<th>Chps</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1</td>
<td><strong>3 Tools</strong> = Equilibrium, Constrained Optimization, Comparative Statics</td>
</tr>
<tr>
<td>2</td>
<td><strong>S&amp;D, Elasticity</strong> (where you left off in principles sequence...)</td>
</tr>
<tr>
<td>3-5</td>
<td><strong>Origins of Demand</strong>: ((x^<em>,y^</em>)) from consumer max utility s.t. budget constraint</td>
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<tr>
<td>6-8</td>
<td><strong>Origins of Supply</strong>: ((L^<em>,K^</em>)) from firms min cost s.t. tech, (P_{\text{inputs}}), Q target</td>
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<td>9</td>
<td><strong>The PC Market</strong> (S&amp;D from aggregating individual U-max and profit-max choices)</td>
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<tr>
<td>10</td>
<td><strong>Govt Interventions in PC Markets</strong> (tax/subsidy, ceiling/floor, Q-quota)</td>
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<tr>
<td>11</td>
<td><strong>Single Seller</strong> or Buyer (compare PC to monopoly &amp; monopsony models)</td>
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NOTE: This is not a textbook endorsement, but rather a map of the appropriate topics for the textbook our department typically uses for ECON310-1.
Indifference Curves (Chp. 3)

• What are the four properties of IC’s we usually assume? Which properties do we relax in the context with some of our goofier IC’s?
• For an unfamiliar utility function, be able to **compute** $MRS_{X,Y}$ (if possible), draw an indifference curve, and determine whether it hits the axes.
• For each of the following types of utility, be able to **draw** two indifference curves, provide a **specific example** of a $U[x,y]$ function, and **explain intuitively** when it wd be useful:
  - Cobb-Douglas Utility
  - Perfect Substitutes
  - Perfect Complements
  - Quasi-Linear Utility
  - Increasing $MRS_{x,y}$
  - A Non-Valued Good
  - A Bad
  - Lesser of Two Evils
  - A Bliss Point
Analyzing an Indifference Curve

\[ U[x, y] = xy + x \]

\[ MU_x = \frac{\partial U}{\partial x} = y + 1 \quad \text{and} \quad MU_y = \frac{\partial U}{\partial y} = x. \]

As \( x \uparrow \), \( MU_x = y + 1 \) is constant.
As \( y \uparrow \), \( MU_y = x \) is constant.

\[ MRS_{x,y} = \frac{MU_x}{MU_y} = \frac{y + 1}{x} \]

\[ \Rightarrow \text{As } x \uparrow , MRS_{x,y} \text{ falls.} \]

Can we find \( U = 12 \) when \( y = 0 \)?
\( U = x(0) + x = 12 \Rightarrow Yes, \text{ at } x = 12. \)
Can we find \( U = 12 \) when \( x = 0 \)?
\( U = (0)y + 0 = 0 \Rightarrow No. \)

Orange Iso-utility \( \bar{U} = 12 \) contains \((1,11),(2,5),(3,3),(4,2),(6,1),(12,0)\).

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
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<tbody>
<tr>
<td>( MU_x = )</td>
<td>( y + 1 )</td>
</tr>
<tr>
<td>( MU_y = )</td>
<td>( x )</td>
</tr>
<tr>
<td>Diminishing ( MU_x )?</td>
<td>No</td>
</tr>
<tr>
<td>Diminishing ( MU_y )?</td>
<td>No</td>
</tr>
<tr>
<td>( MRS_{x,y} = )</td>
<td>( (y+1)/x )</td>
</tr>
<tr>
<td>Diminishing ( MRS_{x,y} )?</td>
<td>Yes</td>
</tr>
<tr>
<td>Does IC intersect x axis?</td>
<td>Yes</td>
</tr>
<tr>
<td>Does IC intersect y axis?</td>
<td>No</td>
</tr>
<tr>
<td>Draw two of the IC’s!</td>
<td></td>
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</table>
Budget Constraints (Chp. 4)

Try to identify each budget constraint by name, shape, and properties.

- The Composite Good Model
- Cash Subsidy
- Voucher or Grant
- Club Discount
- All-U-Can-Eat
- Quantity Discount
- Buy Some, Get Some Free
- Rationing
- Intertemporal Choice ($r_{\text{Borrow}} > r_{\text{Save}}$) OR Limit Per Customer

These new budget constraints usually enable consumer to attain previously unaffordable levels of x.

Our problem typically changes because we now have to think about kinks (what “sticks out?”) and different slopes (-$P_x/P_y$).
3) Suppose your utility function is $U[x, y] = 2\sqrt{x} + y$, with prices $P_x = P_y = 1$ and income $l = 9$.

a) (7 points) Find your utility-maximizing basket, $(x^*, y^*)$.

$$\max_{x, y} U[x, y] \text{ s.t. } l = xP_x + yP_y \Rightarrow \max_{x, y} 2\sqrt{x} + y \text{ s.t. } 9 = x + y$$

If any of $\{x, y\}$ equals zero, then $U > 0$ possible, so we can have either corner solution.

$$MRS_{x,y} = \frac{MU_x}{MU_y} = \frac{P_x}{P_y} \Rightarrow 2\frac{1}{2}x^{-1/2} + 0 = \frac{1}{\sqrt{x}} = \frac{1}{1} \Rightarrow x^* = 1 \quad [\text{Tangency Condition}]$$

$$9 = x + y \quad [\text{Budget Constraint}]$$

Substituting: $9 = x + y = 1 + y \Rightarrow y^* = 8$

[Scoring: 7 = 2 correct $MRS$, 1 tangency, 2 budget, 2 answers $x^*$ and $y^*$]
b) (7 points) Suppose that you have the opportunity to join a discount club. If you pay a membership fee of 2 (i.e., two dollars), then you qualify for 50% off of the price of good x, so your new price would be $P_x = \frac{1}{2}$. Find your new utility-maximizing basket, $(x^{**}, y^{**})$, to determine whether you would prefer to join the club or not.

\[
\max_{x,y} U[x,y] \quad \text{s.t.} \quad I \geq xP_x + yP_y \Rightarrow \max_{x,y} 2\sqrt{x+y} \quad \text{s.t.} \quad 9 - 2 = 7 = \frac{1}{2} x + y
\]

If any of \( \{x, y\} \) equals zero, then \( U > 0 \) possible, so we can have either corner solution.

\[
MRS_{x,y} = \frac{MU_x}{MU_y} = \frac{P_x}{P_y} = \frac{2^{1/2} x^{-1/2}}{1} = \frac{1}{\sqrt{x}} = \frac{1}{2} \Rightarrow x^{**} = 4 \quad \text{[Tangency Condition]}
\]

\( 7 = \frac{1}{2} x + y \quad \text{[Budget Constraint]} \)

Substituting: \( 7 = \frac{1}{2} (4) + y = 2 + y \Rightarrow y^{**} = 5 \)

\( U[x^* = 1, y^* = 8] = 2 \sqrt{1 + 8} = 10 \)

\( U[x^{**} = 4, y^{**} = 5] = 2 \sqrt{4 + 5} = 9, \) and \( 9 < 10, \) so don’t join the club.

[Scoring: 7 = 1 correct MRS, 1 tangency, 1 budget, 2 answers, 1 compare utilities, 1 for recommendation “don’t join”. Note that fewer points are awarded in part (b) for steps very similar to those in part (a).]
c) (10 points) In the space below, draw your original budget line, the discount club budget constraint, the two optima, and the indifference curve that passes through the original basket \((x^*, y^*)\). Be sure to label all of the interesting elements of your graph. TIP: Draw enough points on the indifference curve to indicate both the shape and whether it hits the axes.

[Scoring: 10 = 2 original BL in red, 2 club discount budget constraint in blue, 2 optima at (1,8) and (4,5), 2 red original U=10 indifference curve passing through (1,8) where it is tangent to original BL; -1 for incorrect details such as an axis label, budget constraint intercept or slope, etc. This diagram also shows the green U=9 IC, which wasn’t asked for.]
To Race Fast, Train Fast *(within reason)*

The best way to prepare for taking exams…
…is arguably to be exposed to a number of exams, in various forms 😊

- Evening Homework: Solve old exam problems alone & in groups
- Afternoon Problem-Solving with TA: Do old exam problems on board
- In class: Talk about several exams in great detail
- In class: Take several practice exams, and then discuss answers
- In class: Take actual exams from Summer 2016 ECON 310-1

NATURAL DISCUSSION TOPICS FOR CLASS:
- What are the various parts of an exam?
- How do instructors write exams?
- What can go wrong on exams?
- How should one study for exams?
Pulling Back the Curtain.

- How do we write exams? (Is it okay to reveal this? Would you?)
- Many old exams posted for transparency
- “Imagine me spreading out recent exams and pondering what new set of questions would be reasonably predictable, yet challenging.”
- What would be a new way to ask the same old questions?
- What are some of our favorite twists? (Not “tricks,” BTW)
  - Expanded dimensions: 2-D to 3-D
  - Strange, new functions
    - Continuous?
    - Linear?
    - Flat or steep?
  - Corner or interior solutions?
  - Math, Graphs, Intuition or Application?

Toto reveals the man behind the curtain in *The Wizard of Oz* (MGM, 1939)
(Sorry, no spoiler alert...)
Like a Batter-Challenging Mix of Pitches

• **Fastballs** don’t move, but come straight at you.
  - Fastballs are “easy” to hit if you’re prepared
  - E.g., a standard Cobb-Douglas function: \( U[x,y] = xy \)
  - E.g., a problem covered in the book (see the Learning By Doing exercises) and in detail in class

• **Curveballs** are tougher to hit than fastballs because they curve/move
  - A new angle that requires some interpretation. If \( \frac{(P-MC)}{P} = \frac{-1}{PED} \), then given any 2 values, you can find the 3rd.
  - E.g., a problem featuring an oddly-shaped indifference curve and a corner solution. \( U[x,y] = x(y+1) \)

• **Change-Ups** are pitches that look like fastballs, but are much slower, so fooled batters swing too early
  - Change-Ups may fool the person who “blindly” follows the typical process, so it is important to be patient and think carefully about each problem.
  - E.g., if \( U[x,y] = x^2 + y^2 \), then the indifference curves are bowed-out instead of bowed-in, and the regular calculus approach causes you to minimize utility!

• Important: The goal is **NOT** to trick you, but to assess your understanding & skills (and to challenge you!)
  - Corner solutions and exceptions to our rules may be just as important as nice, interior solutions.
  - We will use a mix of pitches to challenge you.

In class, we’ll take a good, slow look at the most recent Unit 1 Exam. What types of problems are there? Which of our familiar functions are represented? How are the points allocated?
Recognizing Families of Problems

Many “new” problems can be thought of as a variation on a familiar theme. Consider some common functions used in consumer & producer theory.

Study TIP: Gather all of your insights on these “Usual Suspects”

• Cobb-Douglas
• Perfect Substitutes
• Perfect Complements
• Quasi-Linear
• Goofy Cases

TO DO: Go through recent exams, and CATEGORIZE problems. Do you recognize patterns? Can you map each exam problem back to the lecture notes, problem set, or TA discussion section where that concept was covered? You’ll find some method behind the madness.
STUDY TIP: Organizing Facts About Leontief

REAL WORLD
• We often observe people consuming things together; must have both parts to make a whole
  ▪ 1 printer & 1 ink cartridge
  ▪ 1 smartphone & 1 app
  ▪ 8 oz milk & 4 Oreo cookies

INTUITION
• Intuitively, we have perfect complements. Goods must be consumed in fixed proportions
  ▪ Leontief is the fancy name
  ▪ The polar opposite of perfect substitutes. With PS the 2 goods are totally exchangeable. With PC, there is absolutely no substitutability: a left shoe will NOT work as a right shoe!

MATH
• The utility function takes the form of a minimum function
  ▪ Pairs of Shoes = min \{Lefts, Rights\}
  ▪ Float = min \{cans of root beer, ice cream scoops/2\} ⇔ need 2 scoops for each can
  ▪ What if one S’more requires 1 graham cracker, ½ Hershey bar, and 2 marshmallows?

\[ S = \min\{G, 2H, \frac{M}{2}\} \]

GRAPH
• The indifference curves will be take the form of right angles
  ▪ Leontief “L’s”
  ▪ Elbows
• Away from the elbow/corner of the L-shaped IC, there is a mismatch, and the relatively abundant good is effectively non-valued (horizontal or vertical)
Tinkering (Comparative Statics)

Suppose you want to learn how to solve Cobb-Douglas problems.

Consider doing the following sequence of closely related problems, pausing after each to ponder how each little change in assumptions affects your results.

Each iteration makes the recipe more familiar, so you’ll gain insight and speed (think: economies of experience). You’ll be surprised how quickly this goes.

How does \((x^*,y^*)\) depend on relative prices? On income? On exponents?

BTW, this is a nice response to this request: “I have already solved all of the practice problems. Do you have more?”

Find \((x^*,y^*)\) when

\[
U[x, y] = xy, \quad P_x = 1, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = xy, \quad P_x = 1, \quad P_y = 1, \quad I = 18.
\]

\[
U[x, y] = xy, \quad P_x = 1, \quad P_y = 1, \quad I = 72.
\]

\[
U[x, y] = xy, \quad P_x = 2, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = xy, \quad P_x = \frac{1}{2}, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = x^2y, \quad P_x = 1, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = x^{1/2}y, \quad P_x = 1, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = x^{1/2}y^{1/2}, \quad P_x = 1, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = x^{1/4}y^{3/4}, \quad P_x = 1, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = x^{1/4}y^{2/4}, \quad P_x = 1, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = x^{3/4}y^{5/4}, \quad P_x = 1, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = x^\alpha y^\beta, \quad P_x = 1, \quad P_y = 1, \quad I = 36.
\]

\[
U[x, y] = x^\alpha y^\beta, \quad \text{general } P_x, \quad P_y, \quad I = 36.
\]

\[
U[x, y] = x^\alpha y^\beta, \quad \text{and general } P_x, \quad P_y, \quad \text{and } I.
\]
Uh-oh … This exam problem looks strange and scary. … Oh wait a sec. This is just a twist on one of those old Cobb-Douglas problems I’ve mastered. No biggie. (Exposure today makes it more familiar tomorrow.)
Tips for Solving Math Problems

• Wisely move between fractions and decimals
  - E.g., \((3/8)*(8/3) = 1\), not \((0.375)*(2.667)\), despite lots of wasted time computing the latter

• Ponder simplifying assumptions such as \(P = 360 - Q\) or \(C[q] = \frac{1}{2} q^2\)
  - 360 is nicely divisible by 2,3,4,5,6,8,9,10,12,15,18,20,24,30,36; \(MC[q] = q\) and \(AC[q] = \frac{1}{2} q\)

• Our favorite nonlinear functions are \(f[x] = x^2\) and \(g[x] = \sqrt{x}\)
  - We used linear functions in principles to simplify things.
  - ECON often features somewhat depressing realities such as diminishing marginal utility.

• Get used to mathematical equivalents (synonyms) like \(\frac{1}{\sqrt{2}} = \frac{1}{2^{1/2}} = 2^{-1/2}\)

• Many problems begin with partial derivatives, so be comfy with the basics.
• Can you break it?! Pretend you are a beta-tester, trying everything you know to cause the program to crash: extreme values, division by zero, negative quantities.
• Study both elegant and ugly problems. Sometimes we can use tangency conditions, and other times we must rely on bang-for-the-buck logic.
• Take a minute to sketch a graph. It can help you spot unusual circumstances.
Exam-Taking Skills

• Decipher the question: Just what am I being asked to do?
  ▪ PRACTICE: Go through old exam questions or end-of-chapter questions and explain how you would get started.
  ▪ E.g., “Find the utility-maximizing basket of goods” means “Find x* and y*”

• Find the appropriate recipe: How do I always approach this type of problem?
  ▪ E.g., what are the various parts of a multi-step problem?

• Write the optimal amount: show enough work, but not too much.
  ▪ Study suggested solutions to old problems. Neither rush nor linger.

• Find an ideal exam preparation routine. What works best for you?
  ▪ Food? Exercise? Clothing? Sleep?
  ▪ E.g., always start with 2\textsuperscript{nd} problem, so you don’t feel like you’re racing others.

• Be aware of what can go wrong. Try to avoid those things. 😊
  ▪ Too much reading and too little problem-solving. (Identify & acquire appropriate skills.)
  ▪ Too little sleep. (Don’t procrastinate. Spread out your studying.)
  ▪ Ran out of time. (Learn what 50 minutes feels like.)
  ▪ Careless math errors. (Recognize common errors. Show work for partial credit.)
  ▪ Stressed out. Couldn’t focus. (Think of this as a game of puzzles.)
  ▪ Understood it in lecture but exam was much harder. (Try to teach a classmate.)
Graphing 101

• Wisely choose the scale of your axes
• Label all curves, interesting intersections and intercepts
• Graph should complement math and help you check your answers
• A quick sketch is better than nothing. Not always necessary to make it perfect.
• With practice comes speed … and more time to do the rest of the exam!
  ▪ You don’t want to be pondering which curve is demand and which axis is price during an exam.
• There is often an easy way and a hard way to draw complex graphs with several interacting parts.
• Pencil marks are easier to erase than pen ink.
• Think of indifference curves with different personalities:
  ▪ Cobb-Douglas curvy curves … only interior solutions b/c they don’t hit axes
  ▪ L-shaped Leontief “curves” … action always occurs at the elbows (set two elements equal!)
  ▪ Straight lines of perfect substitutes … a constant willingness to trade one for the other; hit both axes, so corner solutions probable
  ▪ Quasi-linear clones … After winning the lottery, you’ll likely use the same amount of toothpaste
Building Community = Sources of Help

• As we were frequently reminded by organizers, a key predictor of academic success is feeling like one has a support group.
• Encourage collaboration throughout the course, even in class.
• Also encourage students to seek help early, and to get questions answered when they are fresh in mind. Don’t be shy!

Many opportunities to build community
  ▪ In-class problems at board (okay to jump in to help peer)
  ▪ Think-pair-share (get used to talking about ECON)
  ▪ Evening homework (try on your own, compare answers with group)
  ▪ Afternoon problem-solving sessions (TA led lively sessions)
  ▪ Office hours (have students work together; get to know instructors)

[A big reason why I plan to do this again. Program clearly added value even if nobody passes 310-1.]
Long-Run Impact (ECON, WCAS)

- Assessment: How to gauge success?
  - Success in BRIDGE II: All students passed the real exams from Summer 2016 ECON 310-1
  - Success in ECON 310-1: Will have a wait a bit for these numbers 😊
  - What if people drop ECON? Maybe early info saved them some pain

- Departmental Discussions of BRIDGE I & II
  - Good excuse to gather all 310-1 instructors to compare exams & topic coverage
  - E.g., do indifference curves belong in principles or theory?
  - E.g., should we introduce Lagrangians?
  - Also, should we change standards if incoming students are changing? (To what extent should we enable any incoming student to major in ECON?)

- College Discussions of all BRIDGE programs
  - Do we want to expand to more courses? (Macro, Micro, Metrics?)
  - Expand to more students?
  - Were three weeks sufficient?
TAKEAWAYS

• 3-week residential BRIDGE program to help at-risk students (Pell-eligible, 1st generation, high school without AP, or struggled in principles) pass micro theory.
• Admissions + Dean’s Office + Instructors collaborate to recruit. Program benefits include course credit, room & board, textbook lending, community.
• If knows prof + community of peers + ask for help, then Pr[academic success] up.
• One way to spend 15 weekdays is whirlwind tour of highlights, interactive AM lectures, collaborative PM problem-solving, evening homework in groups, and LOTS of exam practice.
• Small enrollment meant frequent individual attention and candid discussions of how instructors write exams and how students can prepare for them. Address the “I just don’t test well” excuses – discuss what often goes wrong on exams.
• Useful Tips: Group problems into families. Gather math/graph/intuitive/applied insights about each problem family. Tinker (use comparative statics) with problems to deepen understanding. Teach a friend to gauge your mastery. Develop a bologna detector. Discuss math and graphing tips.
• “That worked for them there, but could it work for me here?” Perhaps a template for a new program OR Here’s why that won’t work at my institution.