

## COST PLANNING TOOL INSTRUCTIONS

The Cost Planning Tool (CPT) is a spreadsheet-based tool that enables institutions to compare the before activities and costs (the traditional course) and the after activities and costs (the redesigned course) and demonstrate cost savings.

The CPT consists of two worksheets:

- Instructional Costs per Hour - This worksheet is used to determine all personnel costs associated with preparing and delivering the course and to express each kind of cost as an hourly rate.
- Annual Cost Comparison – This worksheet is used to compare the costs of the traditional course and the cost of the redesigned course. The outcome is the cost-per-student for both the traditional and the redesigned course.

Here are the steps required to complete the CPT and to calculate the savings that result from redesigning a course:

STEP 1 – Identify the categories of personnel involved in preparing and offering the course in its traditional format and in its redesigned format. Determine all personnel costs expressed as an hourly rate using the worksheet labeled “Instructional Costs per Hour.”

STEP 2 – Calculate the annual cost of offering the course in its traditional and redesigned formats using the worksheet labeled “Annual Cost Comparison.” Enter the total number of sections taught in fall and spring by each type of instructor. The instructional costs of offering the whole course will be calculated by the CPT (multiplying the number of sections taught by the cost of each type of instructor). Enter all other costs associated with offering the course and divide the total cost of the course by the number of students enrolled to generate a cost-per-student for the traditional course.

Specific instructions for each step discussed below are included in the relevant cells. Click on the red triangle in the upper right corner of a cell to see the specific instructions.

### HOW TO COMPLETE THE INSTRUCTIONAL COSTS PER HOUR WORKSHEET

The worksheet labeled “Instructional Costs per Hour” is used to determine all personnel costs associated with preparing and delivering the course expressed as an hourly rate. There are two ways to determine hourly personnel costs.

#### 1) Hourly costs as a Percentage of Salary: Full-Time Faculty (Tenure Track and Non-Tenure Track) and GAs/TAs

##### General instructions (percentage of salary)

- Use the average salary plus benefits costs and professional obligation for each type of instructor involved in the course. Do not show data for all specific individuals involved in teaching the course.

- If a type of instructor shown on the worksheet is not involved in the course, leave the cells blank or delete the headings.
- If another type of instructor is involved in the course, add or substitute headings and columns appropriately.

Entry instructions (percentage of salary)

- Salary and benefits – Enter the average annual salary in the department plus the average value of annual benefits based on that salary average for each type of instructor.
- % devoted to instruction – Enter the percentage of his/her professional obligation that is devoted to instruction on an annual basis.
- % devoted to one section of this course – Enter the percentage of his/her instructional time that is devoted to one section of this particular course on an annual basis
- Cost of one section of this course - the dollar value of the faculty member's time that is devoted to one section of this particular course on an annual basis. The CPT will automatically calculate this number.

**Example**

- Average tenured faculty member's annual salary = \$67,000
- Average tenured faculty member's annual benefits = \$22,538
- Average tenured faculty member's annual salary plus benefits = \$89,538
- Professional obligation expectation = 50% devoted to instruction (50% devoted to research)
- Percentage of instructional time devoted to one section this course = 50% (faculty member teaches one section of the course per semester, two sections of the course per year.)
- Dollar value of the average tenured faculty member's time devoted to one section of this course = \$22,385 (50% devoted to instruction = \$44,769; 50% of instructional time = \$22,385.)
- (If the same faculty member taught two sections per semester, the dollar value of his/her time for one section of this particular course would be \$11,192 and so on.)

General instructions (hours)

- Display the hours for a single instructor by type.
- Use the expected number of hours rather than attempting to calculate the actual number of hours.

*Reason:* Most institutions have a rule-of-thumb expectation. By using this expectation, we avoid the self-reporting problem. Establishing this rule-of-thumb expectation as a framework also encourages faculty members to be more realistic when estimating time associated with specific instructional tasks on the Scope of Effort Worksheet.

Entry instructions (hours)

- Contact hours for course – Enter the number of in-class contact hours for one section of the course.

- Out-of-class hours – Enter the number of out-of-class hours for one section of the course. Most institutions have a rule-of-thumb expectation of something like two hours prep time for each hour spent in class. This number will change when additional tasks like supervising TAs are included.
- Total hours = total contact hours + total out-of-class hours. The CPT will automatically calculate this number.
- Cost per hour - dollar value of the faculty member's time devoted to one section of this course/total number of hours spent on one section of the course. The CPT will automatically calculate this number.

## 2. Pre-Established Course and Hourly Costs

### Adjunct/Part-time Faculty

- Adjunct/part-time faculty are typically paid by the course.
- Enter the average salary of an adjunct (part-time) faculty member to teach one section of the course.
- If adjuncts are paid benefits, calculate the value of his/her annual benefits for teaching one section.

### Professional/Support Staff

- Professional/support staff members typically have an institutional expectation for the total number of hours they are expected to work per week (e.g., a professional staff member gets paid \$21 per hour: total salary and benefits of \$40,000 /1920 working hours) or they may be paid by the hour (e.g., tutors get paid \$15 per hour.)
- List each type of professional/support staff involved in the course by title.
- \$ per hour – Enter the staff member's hourly wage or his/her annual salary/number of hours per year.

### Undergraduate Assistants

- Undergraduate Assistants are typically paid by the hour.
- List each type of Undergraduate Assistant involved in the course if there are differences in roles or hourly wages.
- \$ per hour – Enter the undergraduate assistant's hourly wage.

## HOW TO COMPLETE THE ANNUAL COURSE COST COMPARISON WORKSHEET

### Annual Cost of the Traditional Course

#### Entry instructions

- Total number of sections taught in fall and spring - Enter the total number of sections taught in fall and spring by each type of instructor in Column B, C, D, E and so on in the yellow highlighted cells. Do not include sections taught in summer.
- Enter the total cost of one section of the course taught by each type of personnel in the blue cells.
- Cost of instruction by type - The CPT will calculate the total cost of each type of section in Column B, C, D, E and so on by multiplying the number of sections times the cost of one section, which is calculated on the first page of the CPT.

### **Example**

Ten sections of the course are offered in the fall, and eight sections are offered in the spring, a total of 18 sections offered annually.

- 10 of the 18 are taught by tenured faculty members
- 4 of the 18 are taught by non-tenured full-time faculty members
- 2 of the 18 are taught by adjunct (part-time) faculty members
- 2 of the 18 are taught by graduate teaching assistants

- Total cost of direct instruction – The CPT will sum the total cost of instruction by multiplying the cost of each type of section by the number of each type of section offered in fall and spring.
- Total cost of course coordination – Enter the cost of course coordination in the yellow highlighted cell. If one person functions as a course coordinator, enter the percentage of salary and benefits of that person devoted to this course(s) during fall and spring. For some, that percentage may be 100%; for others, that may be a percentage of total salary and benefits since coordination may be only part of his/her responsibilities. If more than one person functions as a course coordinator, enter the combined salaries and benefits.
- Total cost of other personnel (non-instructional) – Enter the total cost of other course personnel (professional and support staff, undergraduate assistants) during fall and spring in the yellow highlighted cell. Calculate that cost by multiplying the number of hours devoted to the course during fall and spring by each type of professional/support staff by the hourly cost of page 1.
- GRAND TOTAL – The CPT will sum the total cost of offering the course in fall and spring.
- Total # of students – Enter the total course enrollment for fall and spring in the yellow highlighted cell.
- Cost-per-student – The CPT will calculate the cost-per-student by dividing the total cost of offering the course by the total course enrollment.

### **Annual Cost of the Redesigned Course**

#### Entry instructions

- Total number of sections taught in fall and spring - Enter the total number of sections planned to be taught in fall and spring by each type of instructor in Column B, C, D and so on in the yellow highlighted cells. Do not include sections taught in summer.
- Enter the total cost of one section of the course taught by each type of personnel in the blue cells, which is calculated on the first page of the CPT.

NOTE: The reasons for using the same baseline salary figures from the traditional course rather than the actual salaries from the redesigned course are to demonstrate the course's structural-change effect on cost and to isolate the impact of the redesign on those changes. Were one to use actual redesign salaries, the effect might be to deflate the savings simply because of salary increases at the institution between the two timeframes. (Example: instructor salaries in 2009/10 = \$30,000; instructor salaries in 2011/12 = \$32,000.)

**EXCEPTION:** If your cost reduction strategy is to increase the number of sections any instructor (tenure-track faculty, non-tenure-track faculty, adjunct faculty, graduate teaching assistants) carries for the same workload credit, you may change the cost of that type of section appropriately by using the traditional figure as a base.

### Examples

- Traditional: Each full-time faculty carries 10 sections annually (fall and spring) for a full-time workload; each section costs \$8,000.
- Redesign: Each full-time faculty carries 20 sections annually (fall and spring) for a full-time workload; each section costs \$4,000. Enter \$4,000 for the cost of a faculty redesigned section.
- Traditional: Each GTA teaches 2 sections annually (fall and spring) as required teaching load; each section costs \$2,000.
- Redesign: Each GTA teaches 3 sections annually (fall and spring) as required teaching load; each section costs \$1,333. Enter \$1,333 for the cost of a GTA redesigned section.

- The CPT will calculate the total cost of each type of section in Column B, C, D and so on by multiplying the number of sections times the cost of one section.

### Example

Five sections of the course are offered in the fall, and four sections are offered in the spring, a total of 9 sections offered annually.

- 5 of the 9 are taught by tenured faculty members
- 2 of the 9 are taught by non-tenured full-time faculty members
- 0 of the 9 are taught by adjunct (part-time) faculty members
- 2 of the 9 are taught by graduate teaching assistants

- Total cost of direct instruction – The CPT will sum the total cost of instruction by multiplying the cost of each type of section by the number of each type of section offered in fall and spring.
- Total cost of course coordination – Enter the cost of course coordination in the yellow highlighted cell. If one person will function as a course coordinator, enter the percentage of salary and benefits of that person that will be devoted to this course(s) during fall and spring. For some, that percentage may be 100%; for others, that may be a percentage of total salary and benefits since coordination may be only part of his/her responsibilities. If more than one person will function as a course coordinator, enter the combined salaries and benefits.
- Total cost of other personnel (non-instructional) – Enter the total cost of other course personnel (professional and support staff, undergraduate assistants) during fall and spring in the yellow highlighted cell. Use the same hourly rate as you used for the

traditional if the same kinds of personnel are used. Use new hourly rate if new kinds of personnel are used.

- GRAND TOTAL – The CPT will sum the total cost of offering the course in fall and spring.
- Total # of students – Enter the planned total course enrollment for fall and spring in the yellow highlighted cell.
- Cost-per-student – The CPT will calculate the cost-per-student by dividing the total cost of offering the course by the total course enrollment.

### **When You Need to Complete More Than One CPT**

There are several instances when it may be helpful to complete more than one CPT:

- When you plan to redesign more than one course.
- When you are combining more than one course into a single course.
- When you have already begun to redesign a course and are planning further redesign.

### **ASSUMPTIONS OF THE NCAT PLANNING MODEL**

#### **Developmental costs are not included.**

This planning model compares the before costs (current/historical/ traditional) and the after costs (forecast of what the course will cost when it is fully operational, say for example, in its “third” offering)—that is, it asks you to plan what the redesigned course will look like at the end of the developmental process. It does not include the up-front developmental costs of either the traditional or the redesigned course.

The reason for this approach is twofold. The first is that we are trying to show institutions that by investing in IT-based course development, they can see a return on their investment provided that they redesign the course. The second is that, while the developmental period for course conversion has costs associated with it, those costs can be paid for from one-time allocations--such as grants from foundations, federal agencies, or the institution--and/or they can be amortized over any number of years. If institutions can see that they will ultimately realize a return on their investment, they will have an incentive to make the needed developmental investment. Then, of course, questions about how much to invest for how much return come into play.

#### **Institution-wide support services, administrative overhead, infrastructure and equipment costs are not included.**

The assumption is that these costs are constant—are part of the campus environment—for both the traditional and redesigned courses. Campus networking, site licenses for course management systems and desktop PCs for faculty, for example, are part of the campus-wide IT environment.

#### **Who captures the savings?**

The CPT is neutral on the question of who captures the savings. Savings can be used by the department or by the institution in a variety of ways—conduct more research,

teach different courses, teach more students, support an incentive plan to encourage faculty productivity, etc.