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## Program Costing Models at Institutions of Higher Education

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In the past decades, and especially in the current times of economic uncertainty, postsecondary institutions in the West have faced pressure to control costs. One tool employed by some institutions to assess financial data is “program costing” whereby institutions seek to measure the costs associated with delivering a given academic program. In the following report, three program costing models will be presented in an effort to elucidate the methods by which various institutions track costs associated with their academic programs.

## Introduction

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Regularly assessing program offerings is a strategy employed by many institutions. One part of this strategy that can help institutions to benchmark or compare programs financially is the assessment of program costs. It should be noted that in general, costing models (and not just program costing models) can vary widely. The task of accurately measuring costs at colleges and universities is a difficult one. As such, many different methods have been used in attempts to create an ideal costing model. Costing methodologies have been designed around “net price, performance measures and ratios, cost accounting, macro- and micro-costing, activity-based costing (ABC), benchmarking, peer comparisons, responsibility-centered management (RCM), and indirect cost recovery.”<sup>1</sup> Each of these approaches possesses its own strengths and weaknesses, but **a clear “best” model that is applicable across institutions has yet to emerge.**

Generally, a number of researchers have focused on issues of cost accounting. For example, Richard Meisinger (1994) and James Hyatt (1983) have “detail[ed] the NACUBO [the National Association of College and University Business Officers] approach to cost accounting with a focus on costing academic programs and disciplines, including the use of allocation schemes to proportion costs to objectives such as instruction.”<sup>2</sup> According to John Milam, author of “Cost of Instruction: Research and Praxis,” an article which overviews cost of instruction methodologies, “this generally incorporates a **three-tier accounting approach to ‘collect and analyze instructional costs by groupings and levels of cost.’**”<sup>3</sup> The first tier includes “all direct costs” for a specific center/objective to be costed.<sup>4</sup> Tier two adds “indirect costs that can be attributed to the same cost center or objective, related to support services and other forms of overhead such as administration.”<sup>5</sup> Tier three contains “assignable depreciation or use charges for facilities and capital equipment.”<sup>6</sup> Finally, a fourth tier has been added by author Hans Jenny (1996) which deals with revenues.<sup>7</sup>

In building a costing model, a set of basic steps are taken, though exactly how these steps are divided up can vary. For example, in “Cost of Instruction: Research and Praxis,” Milam notes that **five basic steps are taken:** “(1) specify the objective or cost center; (2) determine the categories of cost information; (3) assign tier one costs; (4) assign tier two and three costs; and (5) calculate the output measure or unit cost.”<sup>8</sup>

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<sup>1</sup> Milam, John. “Costs of Instruction: Research and Praxis.” <http://www.highered.org/docs/milam-costofinstructionsynthesis.pdf>, p.4.

<sup>2</sup> Ibid, p.8.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid, p.9.

In the book *A Cost Accounting Handbook for Colleges and Universities*, author James Hyatt follows the same general five steps above, but separates step four (“assign tier two and three costs”) into the following actions:

- (a) allocate annual use charge on all buildings, land improvements, and capital equipment; (b) allocate all plant operation and maintenance costs; (c) allocate all institutional support costs; (d) allocate all academic support costs; (e) allocate all student service costs; and (f) calculate tier three costs for all final cost objectives.<sup>9</sup>

Other authors have more recently focused on **activity-based costing** as a valuable resource for institutions of higher education. For example, all professors at the University of Texas at Austin have used activity based costing to calculate the costs of activities of one academic department (an Accounting Department) in a large public university.<sup>10</sup> As a general framework for cost management, activity-based costing (ABC) models may **assist higher education administrators in identifying opportunities for maximizing profitability and implementing strategic growth strategies**. According to a proposal completed by the President of the Northwest Missouri State University, activity-based costing “identifies activities as the fundamental cost object of the organization,” by utilizing the “cost of these activities as the basis for assigning costs to other cost objects.”<sup>11</sup> In general, the ABC model is comprised of four key steps:

- ❖ “Identify all activities used to achieve outcomes”
- ❖ “Determine the cost of each activity”
- ❖ “Assign costs to outcomes on the basis of the amount of each activity used by the outcome”
- ❖ Re-assign resources to those activities that result in benefits to institutional outcomes and conduct internal benchmarking against other institutions.<sup>12</sup>

As noted by Northwest Missouri State University, integrating an ABC model into the University’s planning process, and at higher education institutions in general, is associated with numerous strategic benefits, such as greater profitability and additional value-added.<sup>13</sup> Other benefits that may accrue as a result of using the

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<sup>9</sup> Ibid.

<sup>10</sup> Granof, Michael H., Platt, David E. et al. “Using Activity-Based Costing to Manage More Effectively.” January 2000. <http://costkiller.net/tribune/Tribu-PDF/Using-Activity-Based-Costing-to-Manage-More-Effectively.pdf>, p.12.

<sup>11</sup> Hubbard, Dean. “Quality, Cost, and Value-Added in Comprehensive Institutions of Higher Education: Towards New, Testable Approaches.” [http://www.offtech.com.au/abc/ABC\\_PDF/sloan.pdf](http://www.offtech.com.au/abc/ABC_PDF/sloan.pdf), p.7.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid, p.8.

model may include: more precise cost information for costing and pricing; improved cost control and management; improved insight into cost causation; improved performance measures; and more accurate “customer profitability analysis.”<sup>14</sup>

In the following report, program costing models/benchmarks from several different institutions will be briefly profiled, in an effort to give the reader a sense of how institutions go about the process of program costing. It should be noted that these program costing models are not meant to give the reader an exhaustive look at all the different methods for calculating the costs of an academic program. Because of the relative dearth of specific program costing models at the college level, only two program costing methodologies from larger universities are included. It should also be noted that due to the **lack of publically available information on program costing**, this report does not contain program costing benchmarks from other colleges.

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<sup>14</sup> Ibid.

## Examples of Several Program Costing Models/Methodologies

### **Manitoba Post-Secondary Institutions Program Costing Methodology**

In an effort to develop an “accountability framework” for Manitoba’s post-secondary education system, the Manitoba Council on Post-Secondary Education (COPSE) has developed a **common program costing methodology** in conjunction with Manitoba’s colleges and universities and the Apprenticeship Branch of Competitiveness, Training and Trade.<sup>15</sup> Manitoba is home to seven public post secondary institutions: the University of Manitoba, the University of Winnipeg, Brandon University, Red River College, Assiniboine Community College, University College of the North, and Le Collège Universitaire de Saint-Boniface, which includes École technique et professionnelle.<sup>16</sup> The Manitoba Council on Post-Secondary Education program costing methodology is laid forth below.

COPSE program costing methodology states that **common definitions** (such as definitions of programs, full load equivalent students, and departments) should be used for all institutions.<sup>17</sup> Furthermore, all costs are to be as closely associated as possible with their sources, and the program costing methodology seeks to deal with every facet of institutional operations.<sup>18</sup>

At its simplest level, the COPSE program costing methodology can be summed up as follows:<sup>19</sup>

$$\textit{Total program costs} = \textit{direct costs} + \textit{indirect costs} + \textit{overhead}$$

Obviously, however, common definitions of each category of costs are necessary if the methodology is truly to be shared by Manitoba’s colleges and universities. The Council on Post-Secondary Education notes that “**direct costs**” **include the following**:

Academic salaries and benefits (including payroll tax), teaching academic chairs salaries and benefits, supplies, travel, printing, professional development, staff development, telephone, photocopying, postage, minor (non-capitalized) equipment, subscriptions and memberships, special early retirement plans, course releases, sabbaticals, other such leaves and associated replacements and savings.<sup>20</sup>

<sup>15</sup> “Manitoba Council on Post-Secondary Education Annual Report 2008-2009.” Manitoba Council on Post-Secondary Education. [http://www.copse.mb.ca/pdf/annual\\_reports/an\\_rpt\\_0809.pdf](http://www.copse.mb.ca/pdf/annual_reports/an_rpt_0809.pdf), p.36.

<sup>16</sup> “What is COPSE?” Manitoba Council on Post-Secondary Education. <http://www.copse.mb.ca/>.

<sup>17</sup> “Program Costing Methodology for Manitoba’s Public Post-Secondary Institutions.” Manitoba Council on Post-Secondary Education. July 11, 2001. [http://www.copse.mb.ca/pdf/cost\\_meth..pdf](http://www.copse.mb.ca/pdf/cost_meth..pdf), p.1.

<sup>18</sup> Ibid.

<sup>19</sup> Equation from: Ibid, p.5.

<sup>20</sup> Ibid.

It is noted that if the above costs do not appear in an institution's "units' line expenditures," they are to be "allocated as if they were direct expenditures."<sup>21</sup> Furthermore, these "direct costs are net expenditures; cost recoveries are deducted if applicable."<sup>22</sup>

**Indirect costs under this program costing methodology cover a wider range of institutional expenditures.** Included in indirect costs are salaries and benefits for the Dean's office as well as for non-teaching academic chairs.<sup>23</sup> Indirect costs also include "support staff salaries and benefits and libraries," as well as the: "Vice-President (Academic) and Vice-President (Research), Graduate Studies and Research Board."<sup>24</sup> Costs related to student services are also to be included. These costs include costs from "admission, registration, counseling, health services, aboriginal services, international students, study skills and academic development (remedial), recreational services, curriculum development, program development, athletics and campus recreation."<sup>25</sup>

Retirement costs are a slightly trickier issue. The COPSE notes that "regular retirements *may* be allocated directly against departments where they occur and in the year that they occur. Special retirement plans should be charged directly to departments if the departments normally prepare a business case to access them."<sup>26</sup> Finally, "Regular retirements and special retirements, such as those not related to department business cases may also be spread across the institution in order to avoid large year over year changes."<sup>27</sup> The COPSE methodology goes on to note that it is possible for regular retirements to be allocated across departments (on the year they occur) based on a percentage of salaries if they are not allocated directly against departments.<sup>28</sup>

In addition to indirect costs, **overhead costs are also considered.** According to the COPSE methodology, overhead costs include staffing costs related to the activities listed below:

- ❖ "Facilities (fuel and utilities, care taking, square footage occupied), property taxes, and security)"
- ❖ "Computer Services"
- ❖ "Financial Services"
- ❖ "Human Resources"

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<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

- ❖ “Central Administration (President’s Office), President/Board costs, VP Admin and Finance”
- ❖ “Materials Management (Purchasing)”
- ❖ “Fund raising and marketing (Public relations)”<sup>29</sup>

The COPSE methodology further notes that in the case of universities, **undirected research by faculty is not disaggregated from the individual’s salary** – as such, these costs are included in the “direct costs” portion of the methodology.<sup>30</sup> This methodology also does not account for research grants from granting councils, “except as required to reconcile the costing data to audited financial statements.”<sup>31</sup>

The three major cost “types” described above must be accounted for in a particular order, as the cost of running facilities/departments such as libraries cannot be accurately calculated without accounting for their utilities and maintenance.<sup>32</sup> As such, “Overhead costs must be allocated first to calculate total direct and indirect costs.”<sup>33</sup>

**Figure 1: Allocation of Overhead Costs<sup>34</sup>**

Cost	Order of Allocation	Allocation Method*
Amortization Facilities-including: Insurance and Security Cleaning and Maintenance Utilities and Taxes Accommodation Cost Recovery System (ACRS) Minor, Un-capitalized Repairs	1	Net assignable square footage by usage, as determined by timetables. Where possible, specific costs at colleges will be assigned to specific facilities (e.g. KCC allocates program costs to campus in Thompson, The Pas, etc)
Computer Services	2	Direct charge based on usage wherever possible and remainder based on % of budget net of recoveries or credit hour/standard student
Financial Services, including Legal Bad debts	3	% of budget net of recoveries Direct charge—if possible, otherwise include with financial services
President and Board of Governors	4	% of budget net of recoveries
Human Resources	5	Based on staff salaries and benefits. The U of W uses the proportion of the budget to allocate this cost.**

<sup>29</sup> Points From: Ibid, p.6.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Figure From: Ibid, p.7.

Cost	Order of Allocation	Allocation Method*
Marketing and Public Relations Fundraising	6	Direct charge and remainder as a % of budget. Fundraising is allocated and has costs allocated to it based on the % of operating budget expenditures net of recoveries***. This includes any costs of foundations.
Materials Management		Direct charge based on usage. The U of W uses the proportion of the budget to allocate this cost.
Staff Services (typing pool)		Direct charge based on usage The U of W uses the proportion of the budget to allocate this cost.

Source: Manitoba Council on Post-Secondary Education.

\* "Allocation should be done on direct charge, or using an approximation."<sup>35</sup>

\*\* "The University of Winnipeg is examining this in the calculation of its costing."<sup>36</sup>

\*\*\* "Fundraising costs should be calculated as the total costs of fundraising from the operating budget. If the revenues from fundraising exceed the costs, than fundraising costs for the purposes of program costing would be zero."<sup>37</sup>

**Figure 2: Indirect Costs and Allocation Method<sup>38</sup>**

Costs	Allocation Method
Salaries and benefits of Deans, non-teaching Chairs, Admin Assistants, Secretaries	Credit Hour (U), Standard Student
Regular retirements (if not allocated directly to departments)	Percent of salaries
Other departmental costs; office supplies, telephone, staff development	Credit Hour (U), Standard Student
Student Services: Registration Counseling Academic Development Health Services Aboriginal Services Special Needs Scholarships, Bursaries and Awards	Credit Hour (U), Standard Student
Libraries Special Services	Direct charge based on usage and the acquisitions expenditures; the remainder based on standard students  Credit Hour (U), Standard Student

Source: Manitoba Council on Post-Secondary Education.

The COPSE methodology goes on to note that scholarship funds must be "expensed and allocated by credit hour/standard student."<sup>39</sup> In addition to this, it stipulates that

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> Figure From: Ibid, p.8.

<sup>39</sup> Ibid.



“Specific scholarship funding and grants are to be treated as recoveries so that the net expense is the scholarships derived from the operating budget.”<sup>40</sup>

At the college level (it should be remembered that the COPSE methodology was designed for use by both colleges and universities), “**standard students**” **will be used to allocate indirect overheads, such as administrative costs to the various programs offered by a given institution.**<sup>41</sup> The calculation of a “standard student” depends on the number of students enrolled in a given academic program, though it does not count students who withdraw prior to incurring a financial penalty.<sup>42</sup> One “standard student” equals “900 academic equivalent hours per year.”<sup>43</sup> As such,

$$\text{Total standard students} = \frac{(\text{Total academic hours} + \text{Total practicum hours} \div 3)}{900}$$

The academic hours mentioned in the above equation include time spent in “lectures, labs, shops, and self-directed courses,” with one hour of class delivery equating to one academic hour.<sup>44</sup> As can be seen in the above equation, **work practicum hours are converted to academic hours at a 3:1 ratio.**<sup>45</sup>

The COPSE program costing methodology also specifies how institutions should go about the **amortization of assets**. The amortization of assets must be included in the program costing calculations and this amortization should be distributed in a manner which seeks to associate costs as closely as possible with their source.<sup>46</sup> Institutions are required to record capital purchases as assets and amortize these assets over their lifetime.<sup>47</sup> In the words of the COPSE methodology, “Capital assets should be recorded at cost and donated assets recorded at fair market value on the date received.”<sup>48</sup> If capital assets are disposed of, they should be removed from accounts at their net book value.<sup>49</sup> In addition to this, “donations of material and equipment must be reported at fair market value,” while “Leasehold improvements must be amortized over the life of the lease or the life of the lease and one renewal term.”<sup>50</sup> Institutions must include objects such as works of art, gems, rare books, and other similar collections in their capital assets, but these assets are not amortized.<sup>51</sup> The Council on Post Secondary Education further notes that universities should prepare two different sets of program costs – one which includes major building

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<sup>40</sup> Ibid.

<sup>41</sup> Ibid, p.11.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

<sup>46</sup> Ibid, p.8.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

capital amortization and one which does not. However, since college buildings are owned by the government, colleges following this methodology are not required to calculate these two separate sets of costs.<sup>52</sup>

The COPSE methodology points out that since colleges and universities have different mandates, there exist slight differences in the amortization rates for colleges and universities in areas such as vehicles and computer equipment; these different amortization rates are shown in the table below. Finally, the COPSE methodology stipulates that all institutions use straight-line amortization.<sup>53</sup>

**Figure 3: Asset Amortization Rates, Colleges versus Universities<sup>54</sup>**

Type of Asset	Colleges	Universities
Buildings and additions	40 Years	50 years. 60 years at the U of W
Leaseholds	Life of the lease and/or one renewal term, or if life of the lease is unknown, 20 years	--
Computers and electronics	5 years major systems, software and hardware 3 years other software and hardware	5 years
Library	Base stock method	10 years
Other furniture and equipment	5 years at RRC - 10 years at ACC, KCC and Princess	5 years
Parking lots	20 years	20 years
Vehicles	5 years	20 years

Source: Manitoba Council on Post-Secondary Education.

According to the COPSE methodology, “Capital assets that are disposed of will be removed from the accounts at their net book value” and will be counted as revenue at the time of their removal from accounts.<sup>55</sup>

Using the above definitions and instructions, institutions using the COPSE program costing methodology can compute a number of different cost calculations. As mentioned above (p.2), **total program costs are merely direct costs plus indirect costs plus overhead costs.**<sup>56</sup> Universities can calculate university cost per departmental credit hour by dividing total departmental costs by the total number of credit hours taught by the department.<sup>57</sup>

$$\text{University cost per departmental credit hour} = \frac{\text{Total departmental costs}}{\text{Total credit hours taught by department}}$$

<sup>52</sup> Ibid.

<sup>53</sup> Ibid, p.9.

<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

<sup>56</sup> Ibid, p.10.

<sup>57</sup> Equation From: Ibid.

Furthermore, institutions can calculate the “college program cost per student” by dividing total program costs by total full load equivalent students.<sup>58</sup>

$$\text{College program costs per student} = \frac{\text{Total program costs}}{\text{Total full load equivalent students}}$$

As featured in the above equations, “full load equivalent students” are used to calculate program costs. The calculation of these “full load equivalent students” is based on student registrations, but again does not include students who withdraw prior to facing a financial penalty.<sup>59</sup>

$$\text{Full Load Equivalent Students} = \frac{\text{Total academic equivalent hours taken by all students in the program}}{\text{Full annual load for normal graduation for that program}}$$

\* Note: “Per year or less.”<sup>60</sup>

Using these definitions and equations, post secondary institutions in Manitoba can report their program costing information to the Manitoba Council on Post-Secondary Education. For more detail on the program costing methodology of COPSE, please see the document provided in the above footnotes.

### Program Costing Model at the University of Southampton

The University of Southampton has developed a program costing model used to accompany the University’s strategic approval application (SAA) for new programs. According to the University of Southampton, this program costing model was developed with the aim of “avoid[ing] complexity” and as such **provides only an approximation of the reality of program costs**.<sup>61</sup> This model seeks to measure program expenditures and incomes over the course of the first three years of the program (the model also includes a calculation of “start up costs” which are “any costs incurred prior to commencement of the programme”).<sup>62</sup> Calculations of expenditures include calculations for staff costs (including professors, lecturers, clerical and technical support, measured on a per-hour basis), space costs (including laboratory, lecture theater, and office costs per hour) and other costs, such as recruitment, stationary and printing, and travelling and subsistence costs.<sup>63</sup> Revenue from the program is also taken into account, and using this model, a “break even

<sup>58</sup> Equation From: Ibid, p.10.

<sup>59</sup> Ibid, p.12.

<sup>60</sup> Ibid.

<sup>61</sup> “SAA Programme Costing Model Guidance.” University of Southampton. [http://www.soton.ac.uk/quality/approval/saa\\_costing\\_guidance.html](http://www.soton.ac.uk/quality/approval/saa_costing_guidance.html).

<sup>62</sup> “SAA Programme Costing Model.” University of Southampton. [http://www.soton.ac.uk/quality/approval/saa\\_costing\\_model.html](http://www.soton.ac.uk/quality/approval/saa_costing_model.html).

<sup>63</sup> Ibid.

number of students” can be generated.<sup>64</sup> Below, the program costing model for the University of Southampton is provided for a fictional “MSc Jousting and Archery” program. This fictional program and the fictional costs associated with it are provided by the University of Southampton.

**Figure 4: University of Southampton Program Costing Spreadsheet<sup>65</sup>**

Expenditure	Rate	Start Up		Year One		Year Two		Year Three	
	£/hour	Hours	£	Hours	£	Hours	£	Hours	£
<b>Staff Costs</b>									
Professor	50	0	0	40	2,000	48	2,400	56	2,800
Lecturer	35	160	5,600	300	10,500	300	10,500	300	10,500
External Teaching	40	0	0	100	4,000	100	4,000	100	4,000
Service Teaching	40	10	400	50	2,000	50	2,000	50	2,000
Clerical Support	20	80	1,600	80	1,600	80	1,600	80	1,600
Technical Support	25	0	0	200	5,000	200	5,000	200	5,000
Other	40	0	0	40	1,600	50	2,000	50	2,000
<i>Sub total</i>		<i>250</i>	<i>7,600</i>	<i>810</i>	<i>26,700</i>	<i>828</i>	<i>27,500</i>	<i>836</i>	<i>27,900</i>
<b>Space Costs</b>									
Laboratory	125	0	0	100	12,500	100	12,500	100	12,500
Lecture Theatre	60	0	0	90	5,400	90	5,400	90	5,400
Seminar Rooms	30	0	0	50	1,500	50	1,500	80	2,400
Office	30	0	0	10	300	10	300	10	300
Other	20	0	0	0	0	0	0	0	0
<i>Sub total</i>		<i>0</i>	<i>0</i>	<i>250</i>	<i>19,700</i>	<i>250</i>	<i>19,700</i>	<i>280</i>	<i>20,600</i>
<b>Other Costs</b>									
Recruitment	N/A	N/A	5,000	N/A	0	N/A	0	N/A	0
Marketing	N/A	N/A	7,000	N/A	3,000	N/A	3,000	N/A	5,000
Bursaries	N/A	N/A	0	N/A	5,000	N/A	5,000	N/A	5,000
Computer hardware	N/A	N/A	0	N/A	0	N/A	0	N/A	0
Computer software	N/A	N/A	2,000	N/A	1,000	N/A	1,000	N/A	1,000
Consumables	N/A	N/A	2,000	N/A	2,000	N/A	2,000	N/A	2,000
Hospitality	N/A	N/A	500	N/A	500	N/A	200	N/A	200
Travelling and Subsistence	N/A	N/A	500	N/A	500	N/A	500	N/A	500
Books	N/A	N/A	500	N/A	500	N/A	200	N/A	200
Stationary and Printing	N/A	N/A	1,000	N/A	1,000	N/A	1,000	N/A	100
Other	N/A	N/A	0	N/A	0	N/A	0	N/A	0
<i>Sub total</i>			<i>18,500</i>		<i>13,500</i>		<i>12,900</i>		<i>14,000</i>

<sup>64</sup> Ibid.

<sup>65</sup> Table From: Ibid.

Expenditure	Rate	Start Up		Year One		Year Two		Year Three	
	£/hour	Hours	£	Hours	£	Hours	£	Hours	£
<b>Direct Expenditure*</b>			26,100		59,900		60,100		62,500
<b>Teaching Staff Overheads**</b>	30	170	5,100	490	14,700	498	14,940	506	15,180
<b>Total Expenditure</b>			31,200		74,600		75,040		77,680
<b>Income</b>									
HEFCE/Other funding		N/A	0	N/A	0	N/A	0	N/A	0
Home/EU - Full time		0	0	10	0	15	0	20	0
Home/EU - Part time		0	0	0	0	0	0	0	0
Overseas - Full time		0	0	4	0	6	0	8	0
Overseas - Part time		0	0	0	0	0	0	0	0
Other per capita income		0	0	0	0	0	0	0	0
<b>Total</b>			0		62,000		93,000		124,000
<b>Net surplus (deficit)</b>			-31,200		-12,600		17,960		46,320
<b>Cumulative surplus (deficit)</b>			-31,200		-43,800		-25,840		20,480
<b>Break even number of students***</b>				17		17		18	

Source: University of Southampton.

\* Note: Direct expenditure equals the addition of subtotals for “staff costs,” “space costs,” and “other costs.”<sup>66</sup>

\*\* Teaching staff overheads are calculated by adding the total number of hours for “professor,” “lecturer,” “external teaching,” and “service teaching” personnel (see rows above) and multiplying this total by “teaching staff overheads” (30 in this case).

In viewing the above program cost model, several facts should be remembered. First of all, it should be noted that, as mentioned above, **this program costing model serves as an approximation of the reality of program costs** and as such should not be taken as the absolute “last word” on the subject. Furthermore, the University of Southampton notes that rates for staff, space costs, and fee rates should be provided by a “School Accountant.”<sup>67</sup> Finally, it should again be noted that the figures in the above table were provided by the University of Southampton for illustrative purposes only and do not reflect the actual costs for the items and services they purport to measure, with one exception – the “teaching staff overheads” has been **set by the University at £30 per hour**.

<sup>66</sup> Ibid.

<sup>67</sup> “SAA Programme Costing Model Guidance.” Op. Cit.

## University of Hawaii (UH) System

The UH System provides an “Academic Program Cost and Revenues Template” for each of its member institutions to use as they assess program costs. The template is presented in full below. Within the UH system, **all proposals for new programs must include an Academic Program Cost and Revenue analysis.** Additionally, all new programs must go through a provisional period during which the program must submit annual updates to the initial analysis. It should be noted that the template below includes projected program costs for a BBA in Entrepreneurship program so as to provide an example of how the program costing model is used.

**Figure 5: Academic Program Cost and Revenues Template: Sample for the BBA/Major in Entrepreneurship<sup>68,69</sup>**

Item	Year 1*	Year 2	Year 3	Year 4	Year 5	Year 6
Enter Academic Year (i.e., 2004-05)	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
<b>Students and Student Semester Hours (SSH)</b>						
A. Headcount enrollment (Fall)	50	70	75	80	85	90
B. Annual SSH	2,025	2,025	2,025	2,025	2,025	2,025
<b>Direct and Incremental Program Costs Without Fringe</b>						
C. Instructional Cost without Fringe	\$316,800	\$329,472	\$342,651	\$356,357	\$370,611	\$385,435
C1. Number (FTE) of FT Faculty/Lecturers	2.00	2.00	2.00	2.00	2.00	2.00
C2. Number (FTE) of PT Lecturers	1.13	1.13	1.13	1.13	1.13	1.13
D. Other Personnel Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
E. Unique Program Costs	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
F. Total Direct and Incremental Costs	\$317,800	\$330,472	\$343,651	\$357,357	\$371,611	\$386,435
<b>Revenue</b>						
G. Tuition	\$571,050	\$639,900	\$708,750	\$708,750	\$708,750	\$708,750
Tuition rate per credit	\$282	\$316	\$350	\$350	\$350	\$350
H. Other	\$18,000	\$17,500	\$18,766	\$20,000	\$21,266	\$21,266
I. Total Revenue	\$589,050	\$657,400	\$727,516	\$728,500	\$730,016	\$730,016
J. Net Cost (Revenue)	-271,250	-326,928	-383,865	-371,393	-358,405	-343,581
<b>Program Cost per SSH With Fringe</b>						
K. Instructional Cost with Fringe/SSH	\$204	\$212	\$221	\$230	\$239	\$249
K1. Total Salary FT Faculty/Lecturers	\$270,000	\$280,800	\$292,032	\$303,713	\$315,862	\$328,496
K2. Cost Including Fringe of K1	\$364,500	\$379,080	\$394,243	\$410,013	\$426,414	\$443,470
K3. Total Salary PT Lecturers	\$46,800	\$48,672	\$50,619	\$52,644	\$54,749	\$56,939
K4. Cost Including Fringe of K3	\$49,140	\$51,106	\$53,150	\$55,276	\$57,468	\$59,639

<sup>68</sup> General Program Cost and Revenues Template From: “Academic Program Cost and Revenues Template: Provisional to Established.” University of Hawaii System. <http://www.hawaii.edu/offices/app/aa/ccao.html>.

<sup>69</sup> Figures From: “University of Hawaii at Manoa Shidler College of Business Undergraduate Major in Entrepreneurship Proposal.” University of Hawaii System. [http://www.hawaii.edu/offices/app/aa/cms/BBA\\_in\\_Entrepreneurship\\_Proposal\\_2\\_13\\_09.pdf](http://www.hawaii.edu/offices/app/aa/cms/BBA_in_Entrepreneurship_Proposal_2_13_09.pdf), p.16.

Item	Year 1*	Year 2	Year 3	Year 4	Year 5	Year 6
L. Support Cost/SSH	\$359	\$359	\$359	\$359	\$359	\$359
Non-Instructional Exp/SSH	\$422	\$422	\$422	\$422	\$422	\$422
System-wide Support/SSH	\$64	\$64	\$64	\$64	\$64	\$64
Organized Research/SSH	\$127	\$127	\$127	\$127	\$127	\$127
M. Total Program Cost/SSH	\$563	\$571	\$580	\$589	\$598	\$608
N. Total Campus Expenditure/SSH	\$690	\$690	\$690	\$690	\$690	\$690
<b>Instruction Cost with Fringe per SSH</b>						
K. Instructional Cost/SSH						
O. Comparable Cost/SSH	\$344	\$344	\$344	\$344	\$344	\$344

Source: University of Hawaii System.

\*Provisional Years (2 yrs for Certificate, 3 yrs for Associate Degree, 6 yrs for Bachelor's Degree, 3 yrs for Masters)

Note: In the program costing undertaken for the BBA in Entrepreneurship program by the University of Hawaii, the program costing model did not include a row "K. Instructional Cost/SSH" although this row is used in the "Academic Program Cost and Revenues Template: Provisional to Established."<sup>70</sup>

The following bulleted points provide some information on how the above costing model is to be filled out.

- ❖ "A. Headcount Enrollment: Headcount enrollment of majors each fall semester."
- ❖ B. Annual Student Semester Hours (SSH): Is to include "all SSH taught by the program, including to non-majors." To obtain annual SSH, the SHH for fall and spring are added together.
- ❖ C. Instructional Cost without fringe is the "direct salary cost for all faculty and lecturers teaching in the program."
- ❖ C1. Pertains to the "number of full time faculty and lecturers who are  $\geq 0.5$  FTE."
- ❖ C2. Pertains to the "number of part time lecturers who are  $< 0.5$  FTE."
- ❖ "D. Other Personnel Cost: Salary cost (part or full time) for personnel supporting the program (APT, clerical lab support, advisor, etc.) This includes personnel providing necessary support for the program that may not be directly employed by the program and may include partial FTEs. Add negotiated collective bargaining increases and 4% per year for inflation thereafter."

<sup>70</sup> "Academic Program Cost and Revenues Template: Provisional to Established." Op. Cit.

- ❖ “E. Unique Program Cost: Costs specific to the program for equipment, supplies, insurance, etc. For provisional years, this would be actual cost. For established years, this would be projected costs using amortization for equipment and add 4% per year for inflation thereafter.”
- ❖ “F. Total Direct and Incremental Cost: C+D+E.”
- ❖ “G. Tuition: Annual SSH X resident tuition rate/credit.”
- ❖ “H. Other: Other source of revenue including grants, program fees, etc. This should not include in-kind contributions unless the services or goods contributed are first recorded in the financial records of the campus and included in the Direct and Incremental costs in this template.”
- ❖ “I. Total Revenue: G+H.”
- ❖ “J. Net Cost: F-I This is the net incremental cost of the program to the campus. A negative number here represents net revenue (i.e. revenue in excess of costs).”
- ❖ “K. Instructional Costs with Fringe/SSH:  $(K2+K4)/B$ .”
- ❖ “K1. Salaries without Fringe of Full Time Faculty and Lecturers who are  $\geq .5$  FTE based on FTE directly related to the program. Add negotiated collective bargaining increases and 4% per year for inflation thereafter.”
- ❖ “K2.  $K1 \times 1.35$ .”
- ❖ “K3. Salaries without Fringe for Lecturers who are  $< .5$  FTE based on FTE directly related to the program. Add negotiated collective bargaining increases and 4% per year for inflation thereafter.”
- ❖ “K4.  $K3 \times 1.05$ .”
- ❖ “L. Support Cost/SHH: The campus’ non-instructional expenditure/ssh + systemwide support – organized research (UHM only) as provided by the UH Expenditure Report.”
- ❖ “M. Total Program Cost/SSH: K+L.”
- ❖ “N. Total Campus Expenditure/SSH: Taken from UH Expenditures Report.”



- ❖ “O. Comparable Program/Division Instructional Cost/SSH: Taken from UH Expenditures Report or campus data, as available.”<sup>71</sup> Respondents should note the program used for comparison purposes in the provided space.<sup>72</sup>

The UH System **publishes support cost per student semester hour for each institution** in the annual UH Expenditure Report. This report likewise includes total campus expenditures per student semester hour, recorded in line N.

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<sup>71</sup> All Quoted Points From: Ibid.

<sup>72</sup> Ibid.

## **Project Evaluation Form**

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