

# Final Analysis of the University of Missouri-St. Louis Transfer Services Department

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## Overview

The UMSL Transfer Services Department is responsible for the recruitment and enrollment of students who are transferring to UMSL. The department has done a great job of bringing in a large number of transfer students to UMSL each year, however there are some things the department could do better to increase the university's transfer student enrollment numbers. First, the Transfer Department should do a better job marketing positive attributes about UMSL, such as its low cost and high quality of education. Second, the department should emphasize the use of its website as a resource for prospective transfer students. Third, it should utilize current UMSL transfer students in the recruitment strategy by acquiring and sharing student testimonials. Performing these three actions will increase web traffic, increase transfer enrollment, and help UMSL become the number one destination for transfer students in St. Louis.

## System Description

The UMSL Transfer Services Department is responsible for recruiting and advising incoming transfer students. One of their main processes involves helping students transfer credits from their previous college to UMSL. This involves transfer specialists first making their presence known by communicating to potential students through the UMSL website, community colleges' websites, using posters, distributing flyers, posting ads in school newspapers, mailing out postcards, and conducting and participating in events at community colleges and at UMSL. Prospective transfer students then begin responding to the department's recruitment efforts and contact a transfer specialist. Students can meet with a recruiter at their local community college campus, where they fill out a contact form and receive additional information about UMSL. Students can also make a phone call to the department or send an email. Other ways to communicate include communicating via Facebook, Twitter, Skype, LinkedIn, Instant Messenger, and Tumblr. Data about phone calls, emails, and appointments gets stored in a CRM database. Transfer Specialists can also pre-evaluate unofficial transcripts to give students an idea of how many of their credits may transfer towards their desired degree program. The student then applies for admission to UMSL by submitting their application, paying a \$35 application fee, and requesting their transcripts from previous college(s). If a student has not sent any of their required items, a transfer specialist will contact them to let them know what they are missing. After the transcript arrives, it is scanned and placed in a queue with the other transcripts to start the credit evaluation process. The Degree Audit System Department is then responsible for evaluating the transcript and figuring out which credits will transfer over. The transfer department will notify the student if their transfer is pending for some



reason. After the transfer department receives notice of which credits will transfer, it relays that information to the student. There is also an appeals process for students who feel that more of their credits should have transferred. After an informal email or phone call, an official letter of acceptance or rejection is sent out as another form of confirmation.

The second main process that the Transfer Services Department is involved with is writing articulation agreements with community colleges. The purpose of articulation agreements is to make it easier for students to transfer from a community college into a certain degree program at UMSL. First, a community college approaches the Transfer Department with a desire to have an articulation agreement written. The Transfer Department then evaluates the courses that the community college offers to see if they will transfer over well to the programs being offered at UMSL. If the community college does not offer the proper courses, then the Transfer Department will not create an articulation agreement with them. If the Transfer Department finds that their courses will transfer well, then the Transfer Department and the department chair of the degree program at UMSL meets with the community college to decide which courses would be best for them to offer. Next, the Transfer Department writes out an articulation agreement draft, verifies it with the community college, and sends it to the UMSL Legal Department for further verification. If the Legal Department disapproves of the draft, the Transfer Department rewrites it. If the Legal Department approves, then the agreement is signed by the UMSL Chancellor and Provost and the community college's head and chief academic officer. Finally, the Transfer Department writes a transfer guide for that agreement and posts it to their website.

The main competitors to the UMSL Transfer Services Department are other universities located in the St. Louis area, such as Southern Illinois University-Edwardsville, Saint Louis University, Lindenwood University, Maryville University, and Webster University.



## Problem

### Transfer Department's perspective

Staff at the Transfer Department perceive there to be two main problems with their department. First, they believe that their website is not comprehensive enough and difficult to navigate through. They fear that their website is not helpful to prospective transfer students. Second, they believe that their transfer student recruitment strategies are not evolving fast enough along with the students, and that is resulting in lower transfer rates to UMSL. Along with the recent area population drop, they fear that while the strategies they are currently implementing worked great in the past, students nowadays are not attracted by them. An example cited was that students ten years ago would attend transfer fairs, while students nowadays do not attend them at all. While they are pleased with how the Transfer Services Department team is customer-focused and how it is an advocate for the students, they fear that what they are doing to recruit transfer students is not enough.

### User's perspective

After surveying 31 current transfer students at UMSL, we found that 54.8% of them did not experience any problems when dealing with the department. Of the students who did experience a problem, the most common one was having some credits that did not transfer successfully, which was experienced by 29% of the respondents. This, however, is to be expected due to the fact that not all courses taken at previous colleges have a relatively equal counterpart at UMSL that can be exchanged for credit.

### Our perspective

After doing a thorough analysis of the UMSL Transfer Services Department, our team found an incredible opportunity that the department is missing out on. The biggest opportunity we found was that the Transfer Department is not utilizing all its resources to capture prospective transfer students. After examining the department's website, posters, and flyers, we found that while they advertised UMSL as a good option, they did not focus on the attributes of UMSL that transfer students really care about. The Transfer Department is in danger of losing students to other universities as a result of not taking into consideration what students are looking for and what they need in a college. UMSL is the best option for many potential students; it's just a matter of the Transfer Department doing a better job of marketing to students that are looking for the best alternative. Another thing that stuck out to us was the absence of any reference to the department's website on their posters. Without advertising the website, incoming transfer students will



miss out on using one of the main resources available to guide them through the transfer process.

## Solution

### Proposal 1

Our first proposal involves setting up a system for the Transfer Services Department to encourage current UMSL transfer students to recommend UMSL to their friends who are currently in community college and are looking for a university to transfer to. If any of the student's friends would then decide to transfer to UMSL, the current student would receive a gift card to either the bookstore or cafeteria. There are many positive attributes about UMSL that prospective students care about that can be distributed to current transfer students to tell their friends, which would likely increase the likelihood that students would want to transfer to UMSL. It would be cheap and generate positive word of mouth.

### Will it work?

There are many reasons why this solution will work. After our questionnaire results, we found that 58.6% of current transfer students found out about UMSL through word of mouth. Since UMSL is largely composed of transfer students, if the Transfer Department utilizes those voices in the community to spread the word about UMSL, more students would likely transfer to UMSL. We also asked current UMSL transfer students why they chose to go to UMSL, and we found that the top reasons were "inexpensive cost relative to other universities" (71%), "high quality of education" (45.2%), and "accredited business program" (32.3%). If current UMSL transfer students are equipped with this information to spread to their friends, then prospective transfer students will find out about the reasons why UMSL is such a great university to transfer to. This system would be very easy to implement and it would be economically feasible. We found, however, that it would not be legally feasible. According to Thompson Coburn, LLP<sup>1</sup>, if a university participates in a federal financial aid program, it must agree that "It will not provide any commission, bonus, or other incentive payment based directly or indirectly upon success in securing enrollments or financial aid to any person or entity engaged in any student recruiting or admission activities or in making decisions regarding the awarding of title IV, HEA program funds, except that this limitation does not apply to the recruitment of foreign students residing in foreign countries who are not eligible to receive title IV, HEA program funds." This legal restriction rendered our first solution infeasible.

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<sup>1</sup>

<http://www.thompsoncoburn.com/insights/blogs/regucation/post/2014-08-11/can-colleges-reward-students-and-alumni-for-referring-new-students->

## Proposal 2

Our second proposal involves the Transfer Services Department implementing a new advertising campaign. Our new advertising campaign would capitalize on positive word of mouth and advertisements at community colleges by creating new posters and adding a "Why UMSL?" page to the website that would highlight previous transfer students' positive experiences at UMSL. Previous transfer student testimonies would also be posted to social media. The posters would focus on the main reasons why students choose UMSL. They would also put a greater emphasis on the Transfer Services Department's website by adding the website URL and a Quick Response (QR) code linking to the website. Adding a QR code to the posters would allow for increased website traffic while allowing the department to view analytics, such as how many people are scanning the codes and where people are scanning the codes. The URL would also be changed from "umsl.edu/transferservices" to "transfer.umsl.edu" to make it easier for prospective students who are not familiar with the UMSL website layout to find the Transfer Services Department's website. That will also help make the Transfer Department's website more distinct from the main UMSL website.<sup>2</sup>

## Will it work?

This solution will work because, from our survey results, we found that the top two ways transfer students found out about UMSL was through word of mouth (58.6% of respondents) and from advertisements at their community college (27.6%). Our own research also found that student testimonials are one of the most effective and untapped resources for increasing enrollment<sup>3</sup> and that, according to a 2014 study, 68% of college students pay attention to poster advertisements at their school.<sup>4</sup> These numbers have lead us to conclude that redesigning the department's posters and displaying transfer student testimonials on the website and social media will result in higher transfer enrollment. The new posters would focus on the main reasons why transfer students choose to go to UMSL, which, as stated previously, are "inexpensive cost relative to other universities" (71%), "high quality of education" (45.2%), and "accredited business program" (32.3%). If students at a community college learn about these great attributes that UMSL has, they will be more

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<sup>2</sup> <https://www.insidenewcity.com/blog/view/web-design-best-practices-everyone-else-is-doing-it>

<sup>3</sup> <http://monitor.icef.com/2013/11/student-testimonials-are-an-untapped-source-of-competitive-advantage-in-recruitment-marketing/>

<sup>4</sup> <http://www.marketingcharts.com/online/which-types-of-ads-do-college-students-pay-attention-to-4096/>

likely to transfer to UMSL. The posters would have a greater emphasis on the website because, according to our survey results, 41.9% of transfer students do not know the Transfer Services Department has a website. Of those who have used the website, however, no one rated it lower than a three out of five for both user-friendliness and amount of useful information. The two methods we are proposing in our solution to increase web traffic are using QR codes and a redesigned URL. From our research, we found that QR codes are still a useful tool today.<sup>5</sup> In a recent article from Techcrunch.com<sup>6</sup>, it was reported that "Snapchat now lets you make QR Snapcodes that open websites and this could create a powerful way for businesses and other sites to promote themselves with photographable symbols instead of just a URL." Similarly, PYMNTS.com<sup>7</sup> revealed that Facebook has quietly been testing QR Codes for offline discounts. "To help businesses continue to connect with customers where they are, we're running a small test that enables people to use the Facebook app to collect and redeem rewards when they make a purchase at a participating store," Facebook said in the statement to PYMNTS. Advertising the website through a redesigned URL and QR code on the posters will increase web traffic while making prospective students aware of a valuable resource available to them.

## How will we be able to tell if this solution is working?

If this solution is implemented, there will be two key indicators to observe to be able to tell if this solution is working or not. First, transfer enrollment should increase. If more prospective transfer students are exposed to current UMSL transfer student testimonials and if marketing strategies that focus on why current students chose UMSL are implemented, then transfer enrollment should increase. Second, the Transfer Department's web traffic should increase. If posters with the website URL and QR code are displayed at community colleges, then more people will visit the website.

## Deliverables

The deliverables for our solution are

- Redesigned posters to display at community colleges that...
  - Focus on the top reasons why current students transferred to UMSL
  - Focus on the website as an important resource available to prospective students through a URL and QR code to the department's website

<sup>5</sup><http://createandtrack.com/2016/10/17/qr-codes-still-relevant-today/>

<sup>6</sup><https://techcrunch.com/2017/01/31/website-snapcodes/>

<sup>7</sup><http://www.pymnts.com/facebook/2017/facebook-quietly-testing-qr-codes-for-offline-discounts-rearil-shopping-rewards/>

- 
- Current UMSL transfer student testimonials displayed on...
    - A "Why UMSL?" page on the Transfer Department's website
    - The Transfer Department's social media accounts
  - Redesigned Transfer Department website URL from "umsl.edu/transferservices" to "transfer.umsl.edu"

## Schedule

- The redesigned posters will involve
  - Doing a more comprehensive transfer student survey to obtain more information and to ensure that our results were not a fluke. Approximate time: 1 month
  - Meeting with the UMSL Marketing Department to come up with approved designs for new posters and allowing the Marketing Department time to design the new posters. Approximate time: 2 - 4 weeks
- The website additions will involve
  - Submitting a URL change request to the UMSL IT services. Approximate time: 1 week
  - Collecting student testimonies, creating a "Why UMSL?" web page, and adding the testimonies to the webpage. Approximate time: 1 - 2 months
  - New student testimonies will have to be collected ongoingly throughout each semester
  - Testimonies will have to be posted to social media ongoingly throughout the semester

## Prototype

Poster prototypes



The best bang for your  
buck university in St.

Louis

Scan to take the next step



or visit us at [transfer.umsl.edu](http://transfer.umsl.edu)



Only Business School in St.  
Louis with AACSB Accredited  
Business and Accounting  
Programs

Scan to take the next step



or visit us at [transfer.umsl.edu](http://transfer.umsl.edu)

Items to note: Main focus of posters are on attributes that current transfer students identified as why they chose UMSL. QR code and website URL are featured. This prototype can be used to see whether or not this solution will actually increase web traffic to the Transfer Department's website. It can also be used to see if focusing on the positive attributes that current transfer students considered will be effective in bringing in new transfer students to UMSL.



## Testimonial prototype



# John Doe

**Major:** Information Systems

**College Transferred from:** St. Louis Community College - Meramec

**Year Transferred:** 2016

Hi! My name is John Doe. I transferred from St. Louis Community College - Meramec in 2016. The reason I chose UMSL was because of the low cost of tuition I have to pay and the good education I receive. My transfer process was very smooth, and most of my credits successfully transferred from my previous college. I should be able to graduate next year! I love the professors here at UMSL, and there were a lot of great events hosted to help me get acclimated to being at a new university.

\*For example only. Not an actual testimony.

Items to note: The testimony provides information about the student's major and college transferred from. This will allow prospective students to relate to the current student featured in the testimony. The testimony also provides information about a current student's positive experience transferring to UMSL, which is a form of word of mouth. This prototype can be used to see whether or not more prospective students will choose to transfer to UMSL due to hearing from current students about their positive experiences at UMSL.

## Cost-Benefit Analysis

### Economic feasibility

In terms of economic feasibility, the main costs would be for the QR code and hiring a student worker to work five hours a week. The reason a student worker should be hired is because current staff members do not have enough time to do any additional work, and our solution would require someone to gather student testimonies and post them to the website and social media. There are two options for the QR code; the department could either subscribe to a service that would allow them to generate QR codes and view the statistics of their usage, or the department could generate a free QR code without being able to view its analytics. The paid QR code would cost \$13.66 per month. Hiring a student worker at \$8 an hour for five hours each week would cost \$160 per month. There would also be a cost of time for the Transfer Department to communicate with the marketing department to come up with new posters, however the department was already planning on redesigning its marketing materials this summer, so redesigning the posters will not add any additional costs that the department was not already planning on incurring. The main benefit would be greater transfer student enrollment because our solution would focus on the reasons why current transfer students chose UMSL and it would allow prospective transfer students to hear about the positive experiences that previous transfer students have. Another benefit would be higher traffic for the department's website because of the inclusion of a QR code and website URL on the posters. We expect the amount of web traffic to increase between 0 and 41.9%. The reason why is because our questionnaire results showed that 41.9% of the respondents did not know the department had a website. Prospective transfer students would also likely experience less confusion when transferring because they will know about the website and all the resources it has to offer.

### Technical feasibility

In terms of technical feasibility, the main requirements are changing the website URL from "umsl.edu/transferservices" to "transfer.umsl.edu," creating a QR code, designing new posters, and adding a new page to the website for displaying previous transfer student testimonies. There are no foreseeable technical limitations to any of these requirements. Ms. Lang would continue to utilize her knowledge to update the website and contact the university's IT department to update the URL address and inquire about the QR code.

### Operational feasibility

In terms of operational feasibility, this solution takes advantage of many opportunities the department is not currently exploiting. First, it could increase the



department's website traffic by up to 41.9% (since that is how many students were unaware of the website's existence), which will be helpful to the users since all of the users who used the website believed it to be average or higher in terms of usability and amount of information. The QR code would also provide real time data analytics that may show a correlation between an increase of website traffic when using Google analytics. This solution will also take advantage of the fact that most UMSL transfer students find out about UMSL through word of mouth by adding student testimonies to the website and social media. It will also take advantage of the fact that the second most common way transfer students find out about UMSL is through advertisements at their community college by focusing on posters. Finally, it will take advantage of the fact that there are clear reasons why transfer students choose to come to UMSL, so by focusing on those reasons through the posters, more students will find out why UMSL is a great university to transfer to.

## Schedule feasibility

In terms of schedule feasibility, the redesigned posters should begin at the end of the 2017 spring semester and be complete by the start 2017 fall semester. The website additions should begin at the beginning of the 2017 fall semester and be complete by the middle of the 2017 fall semester. The redesigned posters will involve a Transfer Department employee meeting with the UMSL Marketing Department to let them know what she wants on the posters and the marketing department designing the posters. This process will likely take between two weeks and one month. The website URL improvement will involve a Transfer Department employee submitting a URL change from "umsl.edu/transferservices" to "transfer.umsl.edu." The website addition will involve a student worker collecting transfer student testimonies, creating a "Why UMSL?" web page, and adding the testimonies to the webpage. This process should begin at the start of the 2017 fall semester and end around the middle of the 2017 fall semester. It will likely take one to two months to complete the URL change and "Why UMSL?" webpage addition, however new testimonies should be added each semester. Each of these tasks will be able to be completed within their allotted timeframe.

## Legal and contractual feasibility

In terms of legal and contractual feasibility, UMSL has a set established guidelines that departments and outside vendors must follow, so there are no anticipated restrictions on redesigning posters or changing the website URL. There will be restrictions, however, in displaying student testimonies, since UMSL students must sign a contract if they wish to allow their photo to be displayed.

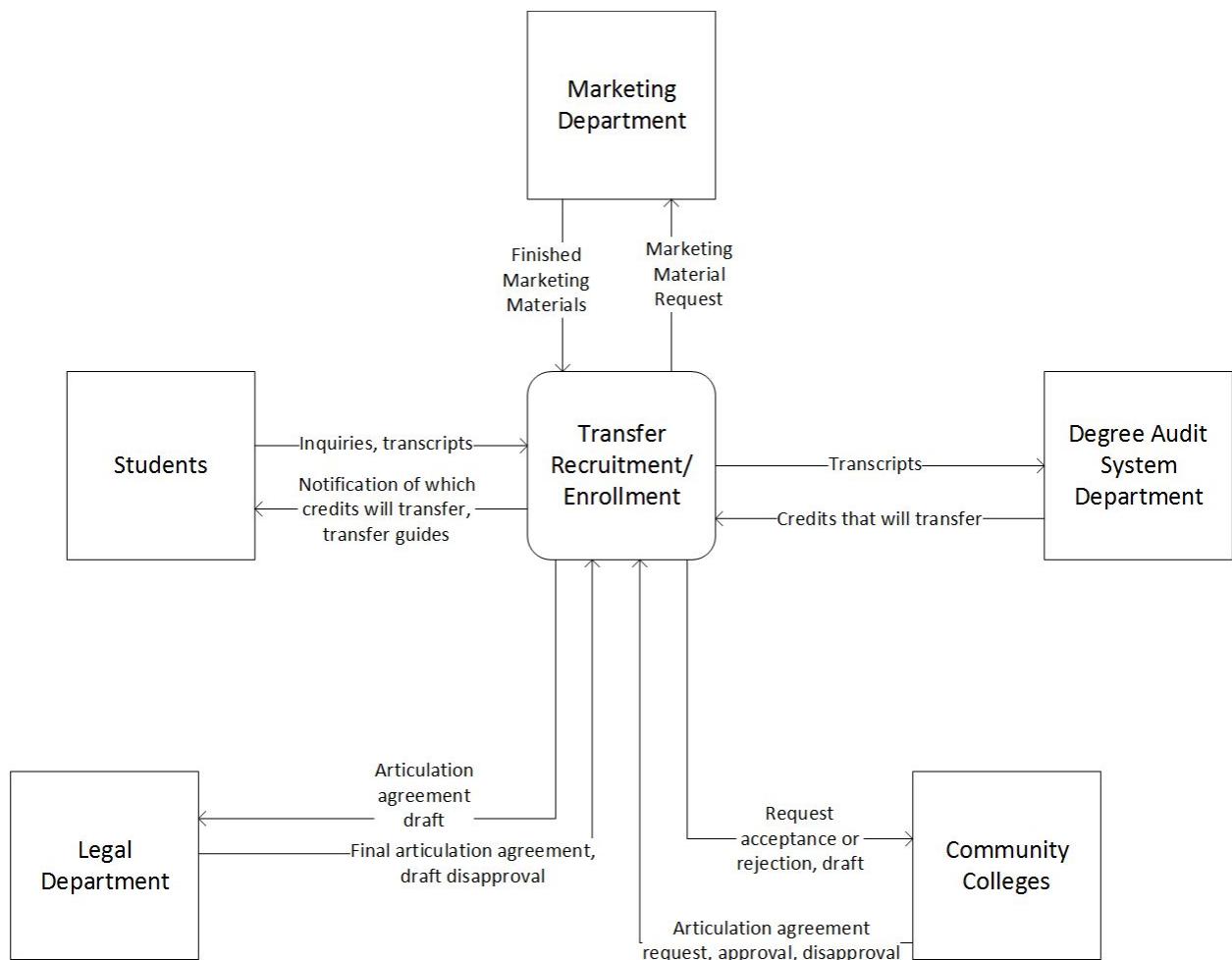
## Political feasibility

In terms of political feasibility, there are no known conflicts that would arise from any other department within the university with the implementation of this solution.

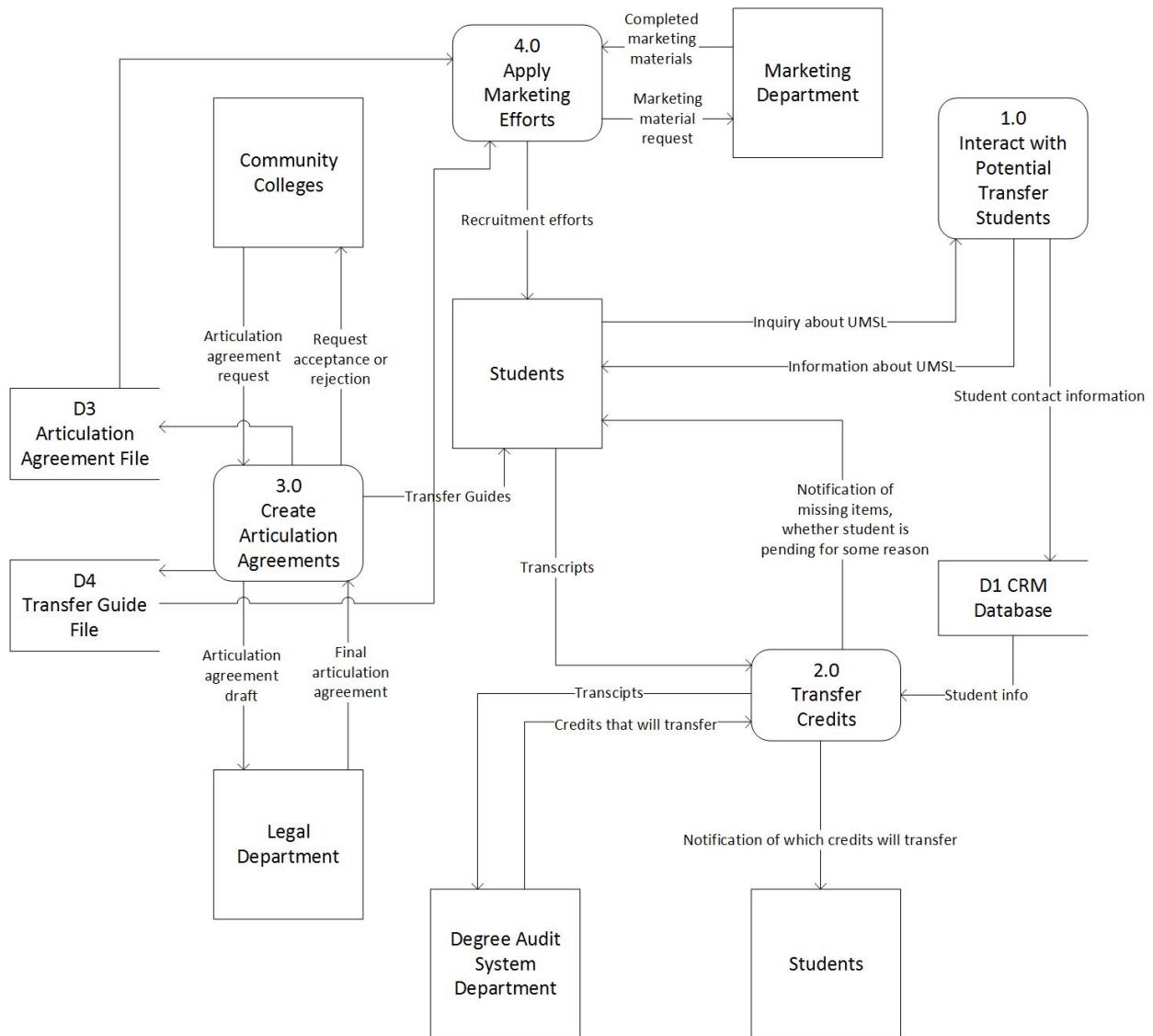
## Appendix A: Data Flow Diagram

\*Note: The only part of the DFD that is affected by our proposal is process 4.

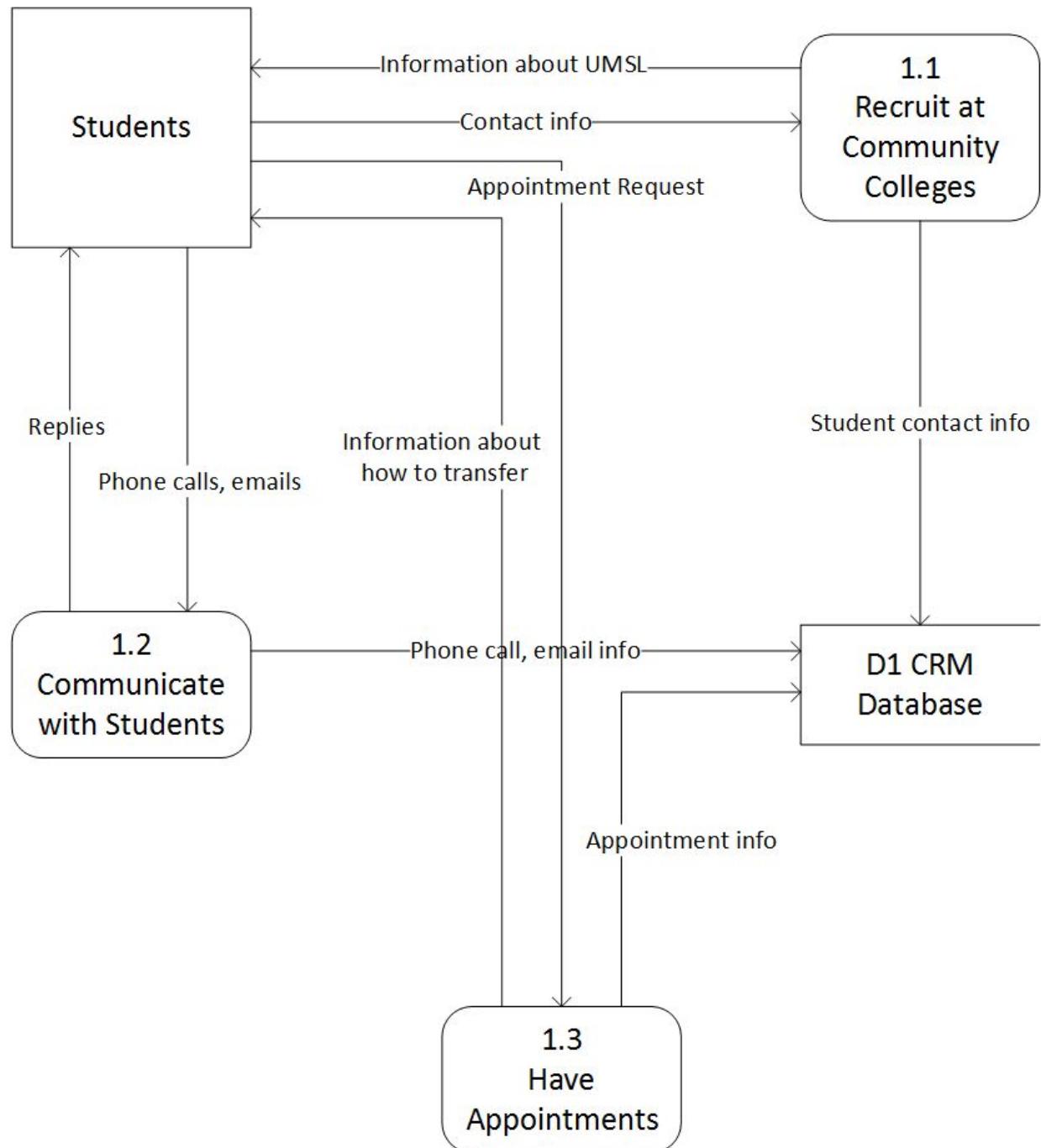
### Context Diagram



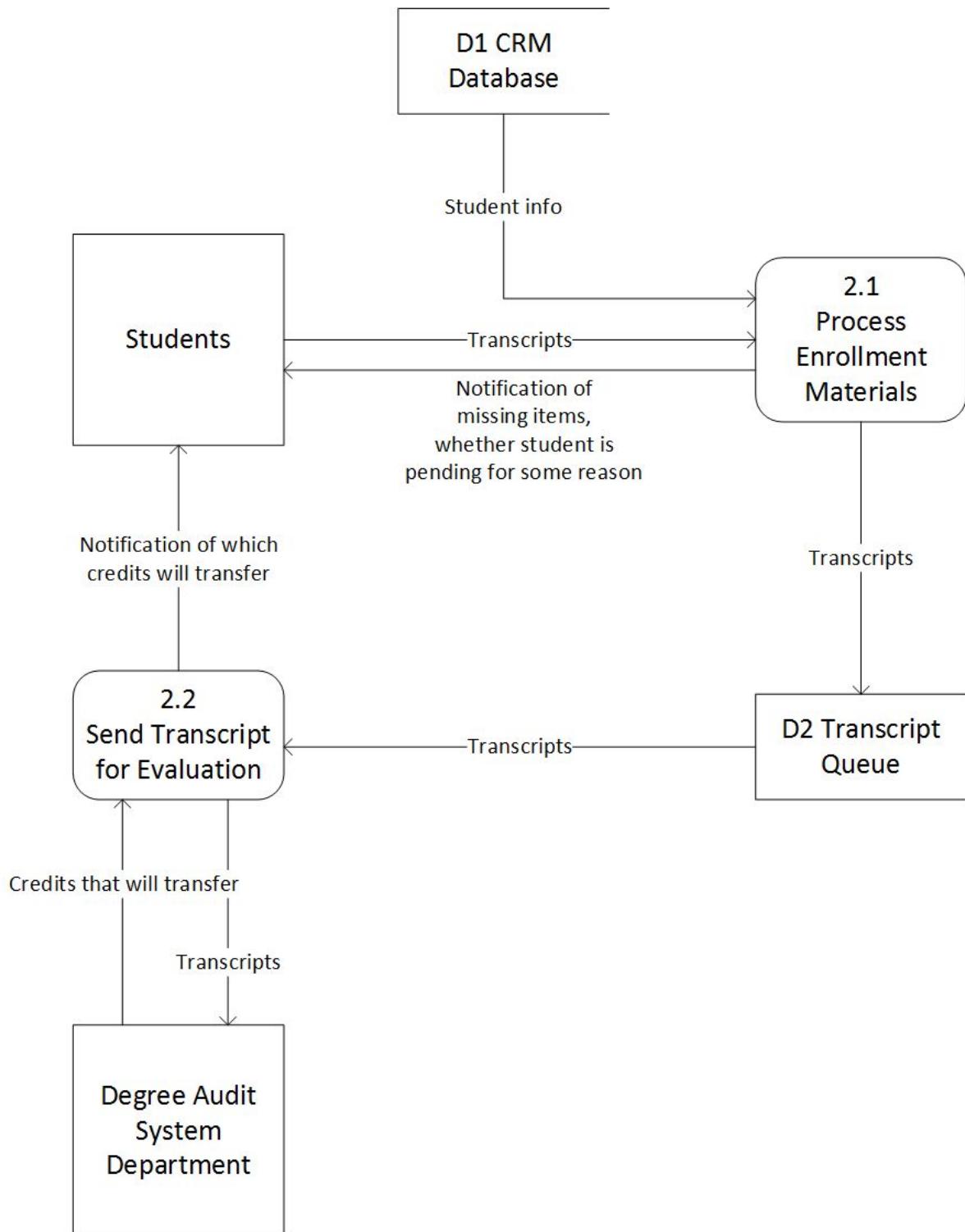
## Level 0 Diagram



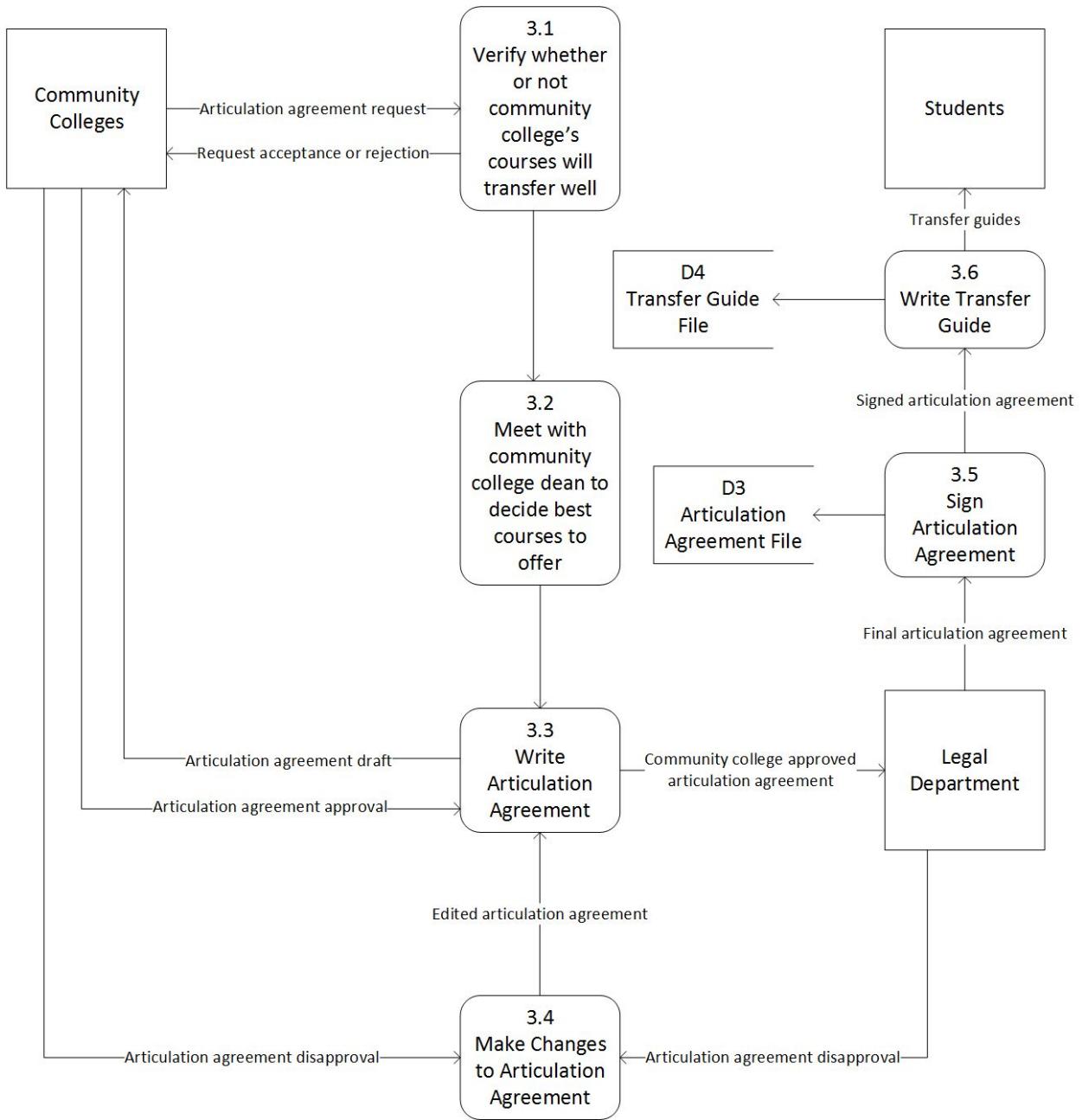
## Explosion of Process 1



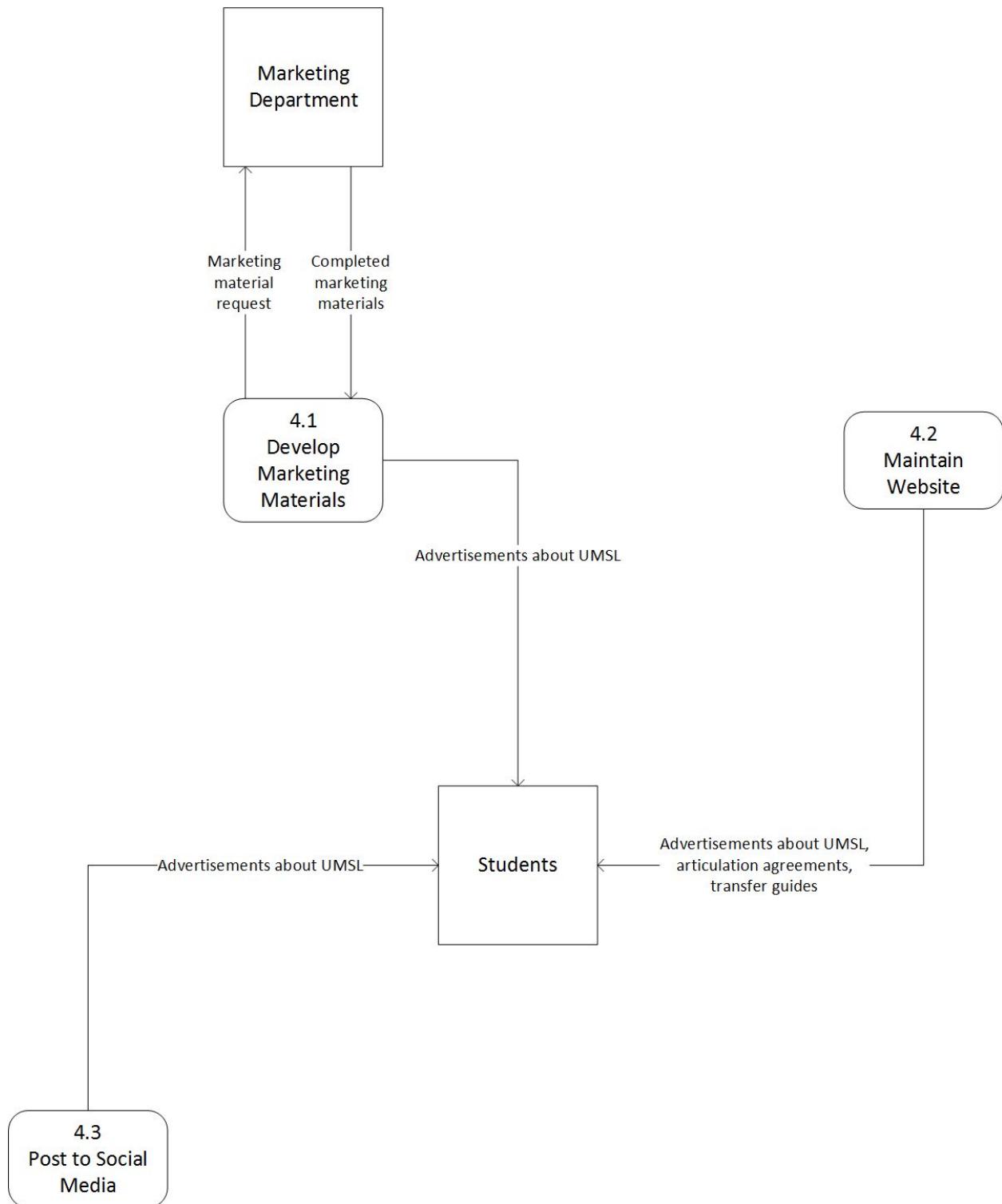
## Explosion of Process 2



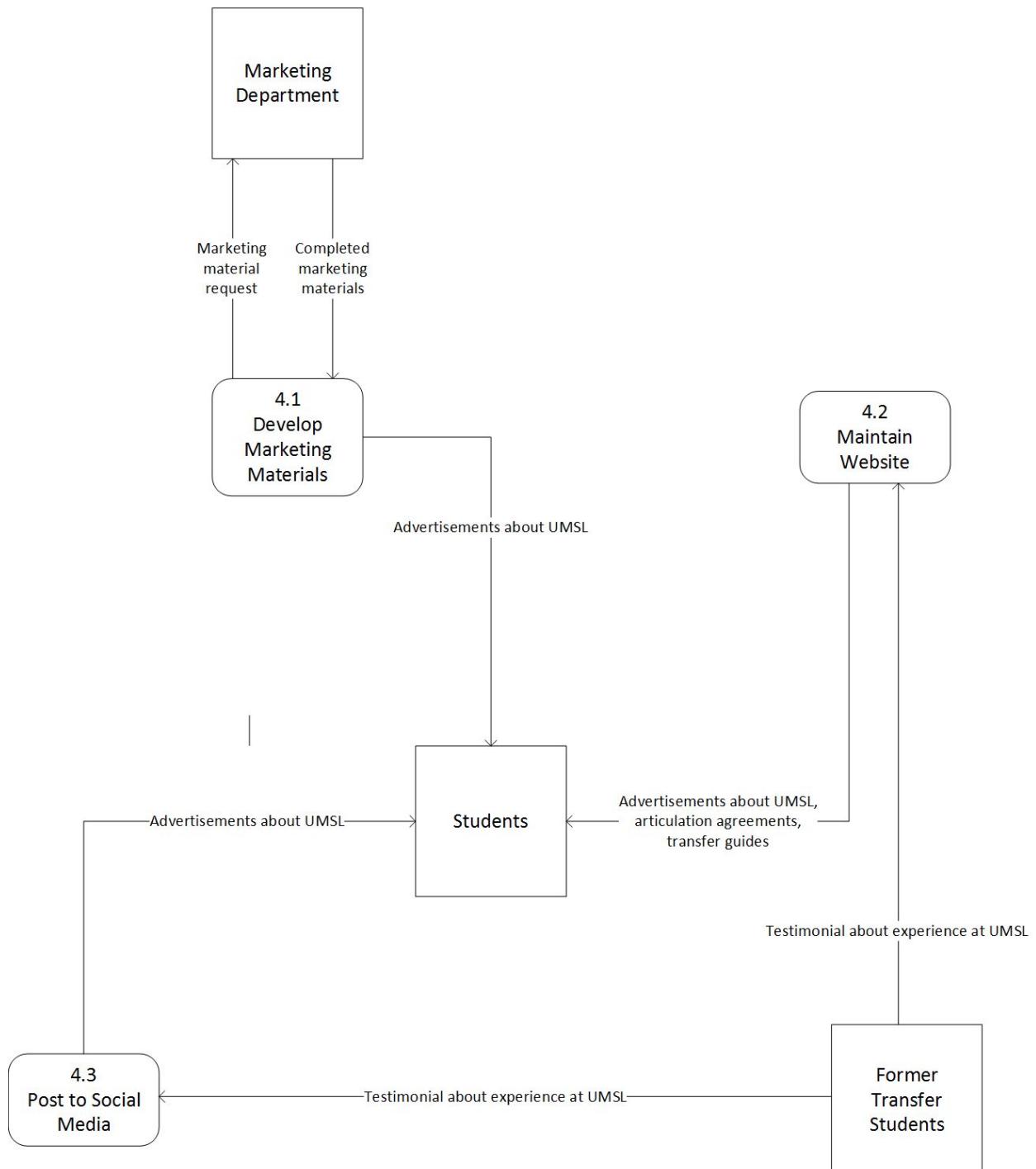
## Explosion of Process 3



## Explosion of Process 4 (Current system)



## Explosion of Process 4 (Proposed)



## Appendix B: Data Dictionary

### Processes

Interact with Potential Transfer Students		Process Reference: 1.0	
Inputs	Logic Summary	Outputs	
Description:	The Transfer Department communicates with prospective transfer students, recruits at community colleges, and has appointments with prospective transfer students.		
Students-1.0, Inquiry about UMSL	If this is the first time a student contacted the department, then store their information in the CRM database.	1.0 - Students, Information about UMSL 1.0 - D1, Student contact information	
No physical reference available at this time.			

Transfer Credits		Process Reference: 2.0	
Inputs	Logic Summary	Outputs	
Description:	The Transfer Department takes students' transcripts, sends them to the Degree Audit System Department for evaluation, and informs students of which credits will transfer		
Students - 2.0, Transcripts D1 - 2.0, Student info Degree Audit System Department - 2.0, Credits that will transfer	If a student is missing any required items or is pending for any reason, the Transfer Department will send them a notification.	2.0 - Students, Notification of missing items, whether student is pending for some reason 2.0 - Degree Audit System Department, Transcripts 2.0 - Students, Notification of which credits will transfer	
No physical reference available at this time.			

Create Articulation Agreements		Process Reference: 3.0	
Description:	The Transfer Department writes articulation agreements with certain community colleges to make it simpler for students at those colleges to transfer to UMSL.		
Inputs		Logic Summary	Outputs
Community Colleges - 3.0, Articulation agreement request		If the community college does not appear to offer the necessary courses that a student must have to transfer to UMSL, then the Transfer Department will reject their request to write an articulation agreement with them.	3.0 - Community Colleges, Request acceptance or rejection
Legal Department - 3.0, Final articulation agreement			3.0 - Legal Department, Articulation agreement draft
			3.0 - Articulation Agreement File, Signed articulation agreements
			3.0 - Transfer Guide File, Completed transfer guides
No physical reference available at this time.			

Apply Marketing Efforts		Process Reference: 4.0	
Description:	The Transfer Department utilizes posters, flyers, communication materials, a website, and social media to advertise UMSL to potential transfer students.		
Inputs		Logic Summary	Outputs
Marketing Department - 4.0, Completed marketing materials		If the Transfer Department produces marketing/advertising materials, then they must be approved by the UMSL Marketing Department.	4.0 - Marketing Department, Marketing material request
D3 - 4.0, Signed articulation agreements			4.0 - Students, Recruitment efforts
D4 - 4.0, Transfer guides			
No physical reference available at this time.			



## Stores

CRM Storage		Data store reference: D1	
Description:	All communication data between the department and prospective transfer students		
Data flows -- in		Data flows -- out	
1.0 - D1, Student contact information		D1 - 2.0 Student info	
Contents	Immediate access analysis not available at this time.		
Student contact information		Physical Organization	
	Student contact info		
	Phone call, email info		
	Appointment info	Data is stored using Hobsons CRM	

Transcript Queue		Data store reference: D2	
Description:	Transcripts received by students that are waiting to be sent to the Degree Audit System Department.		
Data Flows -- in		Data Flows --out	
2.1 - D2, Transcripts		D2 - 2.2, Transcripts	
Contents	Immediate access analysis not available at this time.		
Transcript		Physical Organization	
	Grade Point Average		
	Previous Courses Taken		
	School Attended	Data is stored in a file folder	
	Student Identification		



Articulation Agreement File		Data store reference: D3
Description:	Signed articulation agreements	
Data Flows --in		Data Flows --out
3.0 - D3, Signed articulation agreements		D3 - 4.0, Signed articulation agreements
		Immediate access analysis not available at this time.
Contents		
Signed articulation agreement		
Admissions and Matriculation	Physical Organization	
Transfer of Credit		
Program Plan	Data is stored in a file folder	
Institutional Cooperation		
Transfer Guide File		Data store reference: D4
Description:	Completed transfer guides	
Data Flows --in		Data Flows --out
3.0 - D3, Completed transfer guides		D3 - 4.0, Transfer guides
		Immediate access analysis not available at this time.
Contents		
Transfer Guide		
List of degree programs	Physical Organization	
Which courses should be taken for each degree program	Data is stored in a file folder	

## Flows

DATA FLOW		Marketing materials request		
Source		Description: Process 4.0, Apply marketing efforts		
Destination		Description: Marketing Department		
Expanded description:		Ms. Lang gives ideas to the UMSL Marketing Department about new posters, flyers, or communication materials.		
Included Data Structures		Volume Information		
Marketing Materials		The department only updates its marketing materials every few years		
	Flyers			
	Posters			
	Communication Materials			
Notes:	Ms. Lang does not design the marketing materials herself. She requests what she would like the Marketing Department to make for her.			

DATA FLOW		Completed marketing materials		
Source		Description: Marketing Department		
Destination		Description: Process 4.0, Apply marketing efforts		
Expanded Description		The UMSL Marketing Department provides Ms. Lang with completed posters, flyers, and communication materials.		
Included Data Structures		Volume Information		
Marketing Materials		The department only updates its marketing materials every few years		
	Flyers			
	Posters			
	Communication Materials			
Notes:	The UMSL Marketing Department designs these materials themselves so they comply with UMSL's marketing regulations.			

DATA FLOW		Recruitment efforts		
Source		Description: Process 4.0, Apply marketing efforts		
Destination		Description: Students		
Expanded Description		The Transfer Department markets UMSL to prospective students through marketing materials, their website, and social media.		
Included Data Structures		Volume Information		
Advertisements about UMSL		The department advertises UMSL to prospective students daily.		
	Website content			
	Marketing materials			
	Social media posts	The website is updated with information about events every 2-3 weeks.		
		Social media posts are made daily.		
Notes:	In our proposal, we would like the website to be updated more frequently to include previous transfer student testimonials.			

DATA FLOW		Inquiry about UMSL		
Source		Description: Students		
Destination		Description: Process 1.0, Interact with Potential Transfer Students		
Expanded Description		When prospective students have a question about transferring to UMSL, they submit an inquiry about UMSL.		
Included Data Structures		Volume Information		
Inquiry		Receive around 2200 inquiries a year (based off of 2007-2008 statistics).		
	Emails			
	Phone calls			
	Appointment requests			
Notes:	All inquiry information is stored in the CRM database.			

DATA FLOW		Information about UMSL		
Source		Description: Process 1.0, Interact with Potential Transfer Students		
Destination		Description: Students		
Expanded Description		When prospective transfer students ask a question to the Transfer Department, they reply with an answer		
Included Data Structures		Volume Information		
Answer		Answer around 2200 inquiries a year (based off 2007-2008 statistics).		
	About transfer process			
	About UMSL			
	About degree programs			
Notes:	The questions received could be about anything. Instead of answering a student's inquiry, the department could also set up an appointment with the student for further discussion.			

DATA FLOW		Student contact information		
Source		Description: Process 1.0, Interact with Potential Transfer Students		
Destination		Description: D1, CRM Database		
Expanded Description		After a student submits an inquiry, their contact information is stored in the CRM database.		
Included Data Structures		Volume Information		
Student contact info		The department stores information from around 2200 inquiries a year (based off 2007-2008 statistics).		
	Phone number			
	Email address			
	Street address			
	Name			
Notes:	The department also uses this information so send graduation cards to students who are graduating from community colleges.			

DATA FLOW	Student info			
Source	Description: D1, CRM Database			
Destination	Description: Process 2.0, Transfer Credits			
Expanded Description	The department uses student contact information during the credit transfer process in case they need to contact them for missing items.			
Included Data Structures	Volume Information			
Student contact info	From 2011-2015, the department has averaged 1,800 transfer students each fall semester.			
Phone number				
Email address				
Street address				
Name				
Notes:	This information is mainly used to notify a student if they are missing something or if they are pending for some reason during the transfer process.			

DATA FLOW	Notification of missing items, whether a student is pending			
Source	Description: Process 2.0, Transfer Credits			
Destination	Description: Students			
Expanded Description	If a transfer student is missing any required items (i.e. transcripts) or if their process is pending, the department contacts them.			
Included Data Structures	Volume Information			
Transfer Student Required Items	We are not sure how many students have to be notified for missing items.			
Transcript				
Fee				
Application				
Notes:	The department sends out these notifications to ensure that students are on track to be enrolled by the beginning of the semester.			

DATA FLOW	Transcripts			
Source	Description: Students			
Destination	Description: Process 2.0, Transfer Credits			
Expanded Description	Students who are planning to transfer to UMSL must send in their transcripts from their previous colleges.			
Included Data Structures				Volume Information
Transcript				The average number of transcripts received each fall semester will be above 1,800 since some students have attended multiple schools before attending UMSL.
	Grade Point Average			
	Previous Courses Taken			
	School Attended			
	Student Identification			
Notes:	Transcripts are required so students can be evaluated for which credits will transfer.			

DATA FLOW	Transcripts			
Source	Description: Process 2.0, Transfer Credits			
Destination	Description: Degree Audit System Department			
Expanded Description	After the Transfer Department receives students' transcripts, they are sent off to the Degree Audit System Department for evaluation.			
Included Data Structures				Volume Information
Transcript				The average number of transcripts sent to the Degree Audit System Department each fall semester will be above 1,800 since some students have attended multiple schools before attending UMSL.
	Grade Point Average			
	Previous Courses Taken			
	School Attended			
	Student Identification			
Notes:	The Transfer Department does not perform student transcript evaluations.			

DATA FLOW	Credits that will transfer		
Source	Description: Degree Audit System Department		
Destination	Description: Process 2.0, Transfer Credits		
Expanded Description	After the transcripts are evaluated, the Degree Audit System Department tells the Transfer Department which credits will transfer.		
Included Data Structures		Volume Information	
Transferable Credits		We do not know how many credits will be transferred total each semester, however the average GPA of incoming transfer students from 2011-2015 was 2.90.	
	Course name		
	Number of credits		
	Grade		
Notes:	It is typical for not all of a student's credits to transfer from their previous college.		

DATA FLOW	Notification of which credits will transfer		
Source	Description: Process 2.0, Transfer Credits		
Destination	Description: Students		
Expanded Description	After the Transfer Department receives word of which credits will transfer, they relay that information to the student.		
Included Data Structures		Volume Information	
Transferred Credits		We do not know how many credits will be transferred total each semester, however the average GPA of incoming transfer students from 2011-2015 was 2.90.	
	Equivalent course name		
	Number of credits		
	Grade		
Notes:	From the student's perspective, this is the final flow of information they will typically receive from the Transfer Department.		

DATA FLOW		Articulation agreement request		
Source		Description: Community Colleges		
Destination		Description: Process 3.0, Create Articulation Agreements		
Expanded Description		Whenever a community college wants to make an articulation agreement with UMSL, they reach out to the Transfer Department.		
Included Data Structures		Volume Information		
Community College Program details		Each agreement takes around nine months to complete.		
Courses that are offered				
Associates degree requirements		The department currently has 12 pending articulation agreement requests.		
Notes:	There is not a steady, predictable rate of how many requests come in each year.			

DATA FLOW		Articulation agreement request acceptance or rejection		
Source		Description: Process 3.0, Create Articulation Agreements		
Destination		Description: Community Colleges		
Expanded Description		After the Transfer Department evaluates the courses the community college offers, they either accept or reject their request.		
Included Data Structures		Volume Information		
Community College Program details		Each agreement takes around nine months to complete.		
Courses that are offered				
Associates degree requirements		The department currently has 12 pending articulation agreement requests.		
Notes:	If the courses offered at the community college are incompatible with the degree programs at UMSL, it is unlikely the Transfer Department will accept their request for an articulation agreement.			

DATA FLOW		Articulation agreement draft		
Source		Description: Process 3.0, Create Articulation Agreements		
Destination		Description: Legal Department		
Expanded Description		After Ms. Lang writes a draft of an articulation agreement, she sends it to the UMSL Legal Department for approval.		
Included Data Structures		Volume Information		
Articulation agreement draft		The Transfer Department usually sends around 1-5 articulation agreements to the Legal Department a year.		
	Admissions and Matriculation			
	Transfer of Credit			
	Program Plan			
	Institutional Cooperation			
Notes:	After the Transfer Department sends a draft to the UMSL Legal Department, they may have to make changes to the agreement.			

DATA FLOW		Final articulation agreement		
Source		Description: Legal Department		
Destination		Description: Process 3.0, Create Articulation Agreements		
Expanded Description		After the Legal Department has verified or made changes, the articulation agreement is approved and ready for signing.		
Included Data Structures		Volume Information		
Final articulation agreement		The Transfer Department usually writes around 1-5 articulation agreements a year.		
	Admissions and Matriculation			
	Transfer of Credit			
	Program Plan			
	Institutional Cooperation			
Notes:	Verification from the UMSL Legal Department is the final step before the articulation agreement is signed.			

DATA FLOW	Signed articulation agreement		
Source	Description: Process 3.0, Create Articulation Agreements		
Destination	Description: D3, Articulation Agreement File		
Expanded Description	After the articulation agreement is signed, it is stored in a file with the other articulation agreements.		
Included Data Structures			Volume Information
Signed articulation agreement			1-5 articulation agreements are usually stored each year.
	Admissions and Matriculation		
	Transfer of Credit		
	Program Plan		
	Institutional Cooperation	There are currently 37 articulation agreements on file.	
Notes:	The signed articulation agreements are available for viewing on the Transfer Department's website.		

DATA FLOW	Transfer guides		
Source	Description: Process 3.0, Create Articulation Agreements		
Destination	Description: D4, Transfer Guide File		
Expanded Description	After an articulation agreement is signed, a transfer guide is written and stored in a transfer guide file.		
Included Data Structures			Volume Information
Transfer Guide			Eight schools currently have transfer guides
	List of degree programs		
	Which courses should be taken for each degree program	A new transfer guide is written every time a new articulation agreement is signed.	
Notes:	These guides are written right after an articulation agreement is signed.		

DATA FLOW	Transfer guides			
Source	Description: Process 3.0, Create Articulation Agreements			
Destination	Description: Students			
Expanded Description	After each transfer guide is written, it is made available to prospective UMSL transfer students.			
Included Data Structures	Volume Information			
Transfer Guide	Eight schools currently have transfer guides			
	List of degree programs			
	Which courses should be taken for each degree program	A new transfer guide is made available every time a new articulation agreement is signed.		
Notes:	These transfer guides are written to help current community college students who want to go to UMSL pick which courses to take.			

DATA FLOW	Testimonial about experience at UMSL			
Source	Description: Former Transfer Students			
Destination	Description: Process 4.2, Maintain Website			
Expanded Description	Former transfer students will provide information about their experience at UMSL to add to the Transfer Department's website.			
Included Data Structures	Volume Information			
Testimonial	The number of testimonials added could range from one every month to one every week			
	Student name			
	Major			
	College Transferred From			
	Year Transferred			
	Testimonial			
Notes:	The number of testimonials added depends on how whether or not students want to provide a testimonial.			



DATA FLOW		Testimonial about experience at UMSL	
Source		Description: Former Transfer Students	
Destination		Description: Process 4.3, Post to Social Media	
Expanded Description		Former transfer students will provide information about their experience at UMSL to post on social media.	
Included Data Structures		Volume Information	
Testimonial	Student name	The number of testimonials added could range from one every month to one every week	
	Major		
	College Transferred From		
	Year Transferred		
	Testimonial		
Notes:	Social media pages are updated more often than websites, but the number of testimonials posted depends entirely on how many students wish to provide a testimonial.		
DATA FLOW		Signed articulation agreements	
Source		Description: D3, Articulation Agreement File	
Destination		Description: Process 4.0, Apply Marketing Efforts	
Expanded Description		After the articulation agreements are signed and stored, they are displayed on the website.	
Included Data Structures		Volume Information	
Signed articulation agreement	Admissions and Matriculation	1-5 articulation agreements are usually signed each year.	
	Transfer of Credit		
	Program Plan		
	Institutional Cooperation		
Notes:	In our proposal, this job would be done by a student worker.		

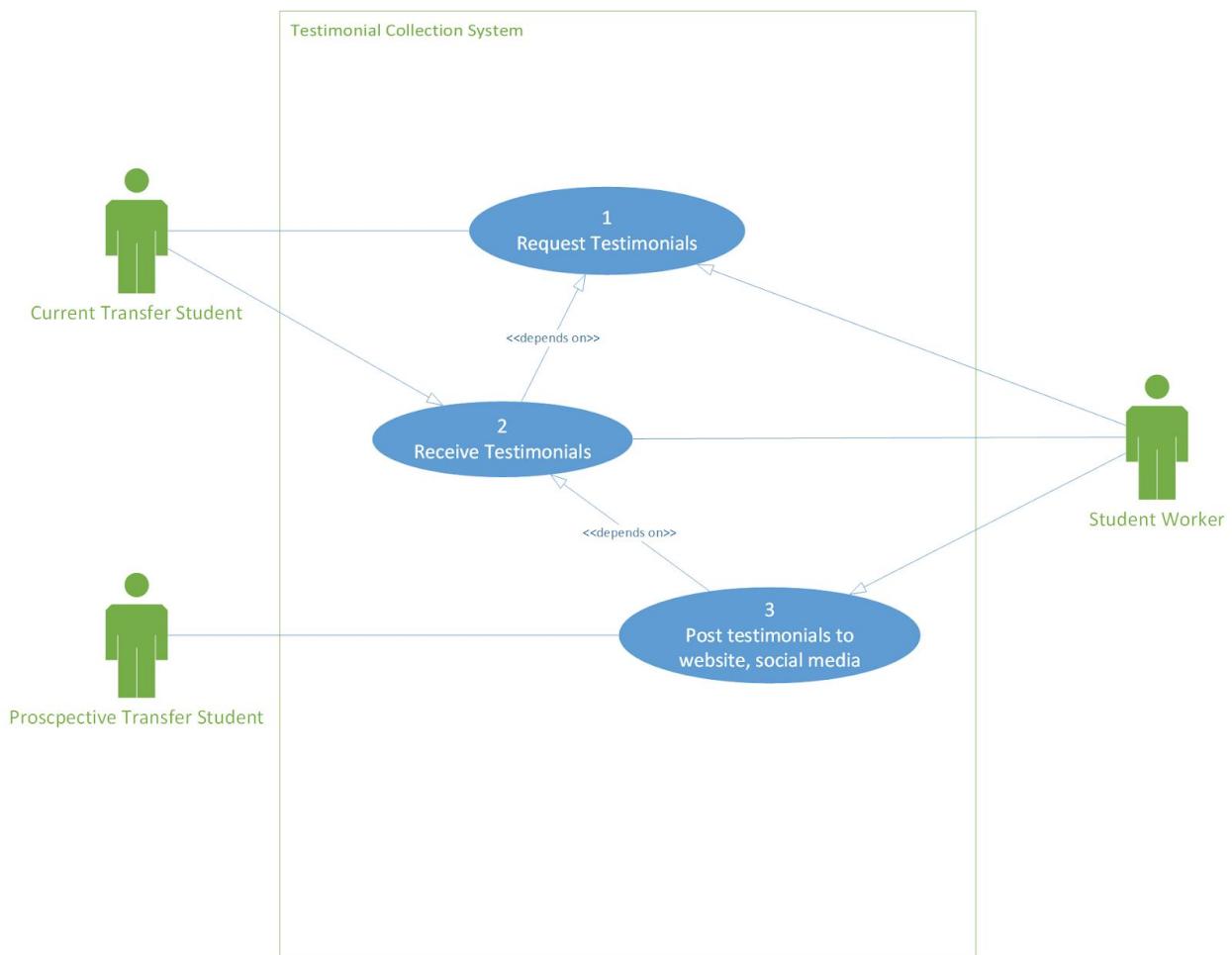


DATA FLOW	Transfer guides		
Source	Description: D4, Transfer Guide File		
Destination	Description: Process 4.0, Apply Marketing Efforts		
Expanded Description	After being written and stored, the transfer guides are displayed on the department's website.		
Included Data Structures	Volume Information		
Transfer Guide	Eight schools currently have transfer guides		
	List of degree programs		
	Which courses should be taken for each degree program	A new transfer guide is made available every time a new articulation agreement is signed.	
Notes:	In our proposal, this job would be done by a student worker.		

## Appendix C: Use Case Of Our Solution

\*Note: This use case only covers the portion of our solution relating to student testimonials

### Diagram



## Narratives

Testimonial Collection System				
Author(s):	Kyle Hopfer, Andrew Mueller, Omar Salih, Theresa Zinngrabe		Date:	05/08/2017
			Version:	0.1.0
Use-Case Name:	Request Testimonials		Use-Case Type	
Use-Case ID:	1		Business Requirements	
Priority:	High			
Source:	Our analysis			
Primary Business Actor:	Student Worker - sends out a request for testimonials from current transfer students			
Other Participating Actors:	Current transfer students - receive the request for them to write testimonials			
Other Interested Stakeholders:	The Transfer Department - Interested in receiving testimonials to display them for prospective students to read			
Description:	This use case describes the event of a student worker sending out a request to current transfer students for testimonials about their experience at UMSL. The testimonies can be received through email. Generally, the department will be looking for positive experiences from current transfer students, and it will be best to request testimonials from students with many different majors.			

Testimonial Collection System				
Author(s):	Kyle Hopfer, Andrew Mueller, Omar Salih, Theresa Zinngrabe		Date:	05/08/2017
			Version:	0.1.0
Use-Case Name:	Receive Testimonials		Use-Case Type	
Use-Case ID:	2		Business Requirements	
Priority:	High			
Source:	Our analysis			
Primary Business Actor:	Current transfer student - sends a testimonial to the system, allowing the system to receive it			
Other Participating Actors:	Student worker - takes the testimonial after the system receives it			
Other Interested Stakeholders:	The Transfer Department - Interested in receiving testimonials to display them for prospective students to read			
Description:	This use case describes an event where the system receives a testimonial from a current transfer student about their experience at UMSL. After receiving the testimonial, a student worker grabs it for further use. Note: this event depends on the request testimonials event being successfully executed.			

Testimonial Collection System			
Author(s):	Kyle Hopfer, Andrew Mueller, Omar Salih, Theresa Zinngrage	Date:	05/08/2017
		Version:	0.1.0
Use-Case Name:	Post Testimonials to website, social media		Use-Case Type
Use-Case ID:	3		Business Requirements
Priority:	High		
Source:	Our analysis		
Primary Business Actor:	Student worker - takes the received testimonials and posts them to the Transfer Department's website and social media pages.		
Other Participating Actors:	Prospective transfer students - after the student worker posts the testimonials to the website and social media, prospective students are able to see that information and hopefully be influenced by it to transfer to UMSL.		
Other Interested Stakeholders:	The Transfer Department - Interested in displaying transfer student testimonials for prospective students to read		
Description:	This use case describes an event where a student worker takes the received transfer student testimonials and posts them to the Transfer Department's website and social media accounts. Those testimonials are then available for prospective transfer students to read. Note: this event depends on the receive testimonials event to be successfully completed.		



## Appendix D: Questionnaire Results

### Question 1

How did you find out about UMSL (Check all that apply)?

- a. Advertisement at your previous college
- b. Word of mouth
- c. Web advertisement
- d. Billboard advertisement
- e. College transfer fair
- f. Advertisement at your office
- g. Social media
- h. Other (please specify)

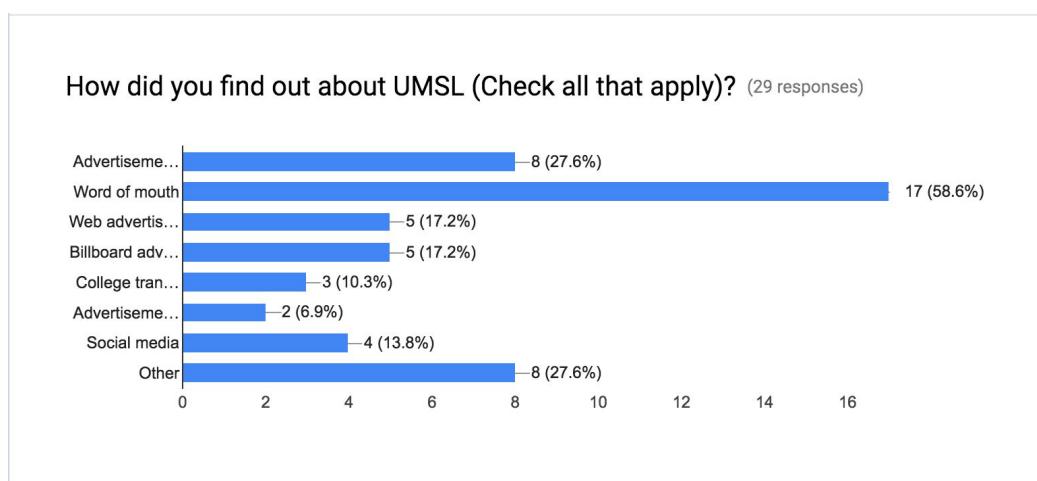
### Responses

- 1. No response
- 2. Web advertisement
- 3. Word of mouth, billboard advertisement, social media
- 4. Advertisement at your previous college, parents
- 5. Word of mouth
- 6. Web advertisement, billboard advertisement, social media
- 7. Word of mouth
- 8. Word of mouth
- 9. Advertisement at your previous college, word of mouth
- 10. Government agency
- 11. Advertisement at your previous college, word of mouth, college transfer fair, my friends go here
- 12. Advertisement at your previous college
- 13. Lived in St. Louis my whole life. Always have known of UMSL
- 14. Word of mouth
- 15. Word of mouth



16. Advertisement at your previous college, word of mouth
17. Revolution Campus Ministry
18. Advertisement at your previous college, word of mouth, billboard advertisement, college transfer fair
19. Recruiter on the SLCC campus
20. Advertisement at your previous college, web advertisement, billboard advertisement, college transfer fair, advertisement at your office
21. Web advertisement
22. Word of mouth, college research
23. Word of mouth
24. Word of mouth
25. No response
26. Advertisement at your office
27. Parent obtained a master's degree in education at UMSL
28. Word of mouth, social media
29. Advertisement at your previous college, word of mouth, web advertisement, billboard advertisement, social media
30. Word of mouth
31. Word of mouth

## Chart to display results





## Question 2

Why did you choose to go to UMSL (Check all that apply)?

- a. Inexpensive cost relative to other universities
- b. High quality of education
- c. Your employer asked you to get a degree
- d. Close to home
- e. Recommendation from others
- f. Accredited Business Program
- g. Other (please specify)

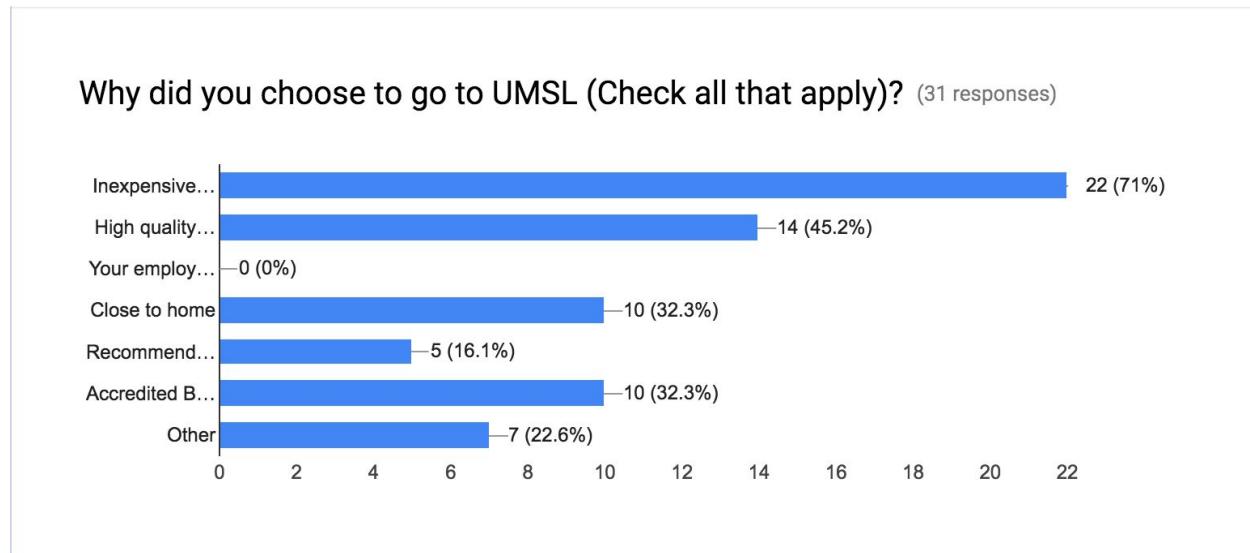
## Responses

- 1. Inexpensive cost relative to other universities
- 2. Inexpensive cost relative to other universities, high quality of education, recommendation from others
- 3. High quality of education, recommendation from others
- 4. High quality of education, close to home, accredited business program
- 5. Inexpensive cost relative to other universities, high quality of education, close to home
- 6. High quality of education, close to home
- 7. Accredited Business Program
- 8. Inexpensive cost relative to other universities
- 9. Inexpensive cost relative to other universities, high quality of education
- 10. Government agency
- 11. Inexpensive cost relative to other universities
- 12. Inexpensive cost relative to other universities
- 13. Inexpensive cost relative to other universities, close to home, accredited business program
- 14. Inexpensive cost relative to other universities, high quality of education, accredited business program
- 15. Inexpensive cost relative to other universities, diverse majors

- 
16. Inexpensive cost relative to other universities, recommendation from others, accredited business program
  17. I came to UMSL to be apart of Revolution Campus Ministry from Chicago Illinois
  18. Inexpensive cost relative to other universities, high quality of education, accredited business program
  19. High quality of education, close to home, accredited business program
  20. Inexpensive cost relative to other universities, close to home
  21. Inexpensive cost relative to other universities, high quality of education, CCJ Program
  22. Inexpensive cost relative to other universities, high quality of education, accredited business program
  23. Inexpensive cost relative to other universities, high quality of education, close to home, recommendation from others
  24. Inexpensive cost relative to other universities, accredited business program
  25. Inexpensive cost relative to other universities, I needed to get back in school
  26. Inexpensive cost relative to other universities, accredited business program
  27. The community college I attend had a nearly flawless credit transfer agreement with UMSL.
  28. Washington University Joint Undergraduate Engineering Program
  29. Inexpensive cost relative to other universities, close to home
  30. Inexpensive cost relative to other universities, high quality of education, close to home, recommendation from others
  31. Inexpensive cost relative to other universities, high quality of education, close to home



## Chart to display results



## Question 3

Did you experience any problems when transferring to UMSL? (Check all that apply)

- a. Some credits did not successfully transfer
- b. Not enough information on the transfer department's website
- c. Transfer department's website was hard to navigate
- d. Unknowledgeable transfer specialists
- e. Poor communication from transfer specialists
- f. I did not experience any problems
- g. Other (please specify)

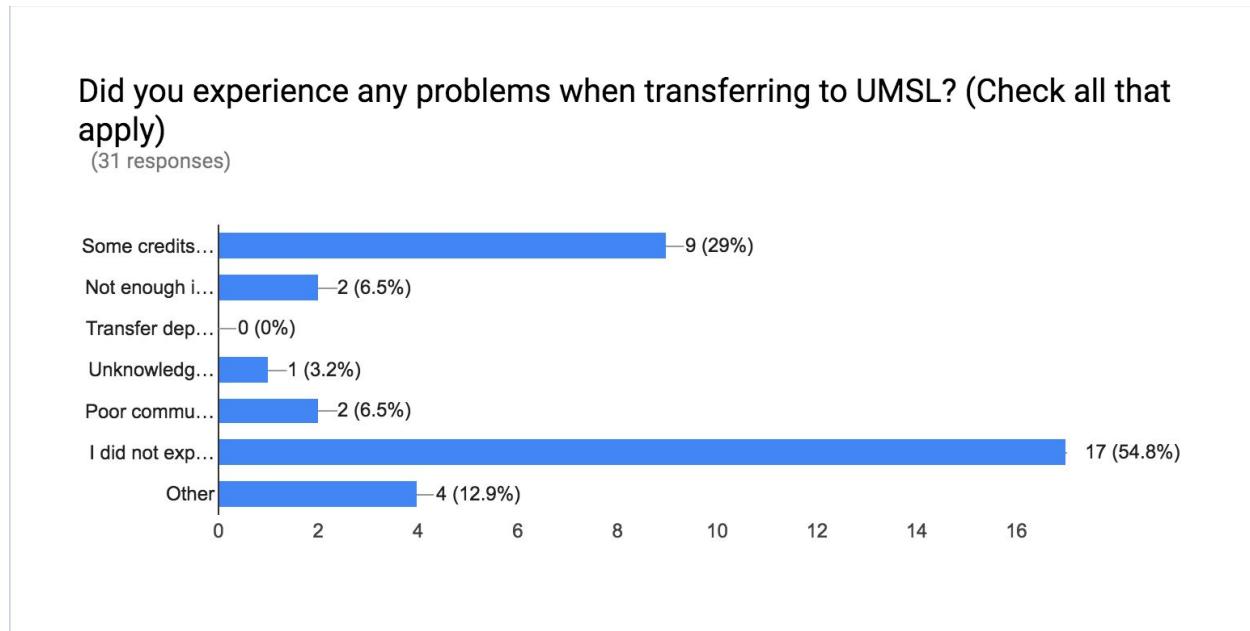
## Responses

1. I did not experience any problems
2. I did not experience any problems
3. I did not experience any problems
4. I did not experience any problems
5. A few questions about Transfer/ AA degree scholarships.
6. I did not experience any problems

- 
7. I did not experience any problems
  8. I did not experience any problems
  9. Poor communication from transfer specialists
  10. I did not experience any problems
  11. I did not experience any problems
  12. Some credits did not successfully transfer, poor communication from transfer specialists
  13. Some credits did not successfully transfer
  14. I did not experience any problems
  15. Some credits did not successfully transfer, not enough information on the transfer department's website
  16. My old school sent my degree without the final stamp saying I graduated so I had to pay out more money to get it fixed.
  17. Some credits did not successfully transfer
  18. Some credits did not successfully transfer
  19. I did not experience any problems
  20. Not enough information on the transfer department's website, unknowledgeable transfer specialists
  21. Some credits did not successfully transfer
  22. I did not experience any problems
  23. I did not experience any problems
  24. Some credits did not successfully transfer, they would not answer any questions over the phone
  25. I did not experience any problems
  26. I did not experience any problems
  27. Financial Aid Office tried denying me scholarships I was eligible for, and had earned and accepted.
  28. Some credits did not successfully transfer
  29. I did not experience any problems
  30. Some credits did not successfully transfer
  31. I did not experience any problems



## Chart to display results



## Question 4

How would you rank the usability of the UMSL Transfer Services Department's website?

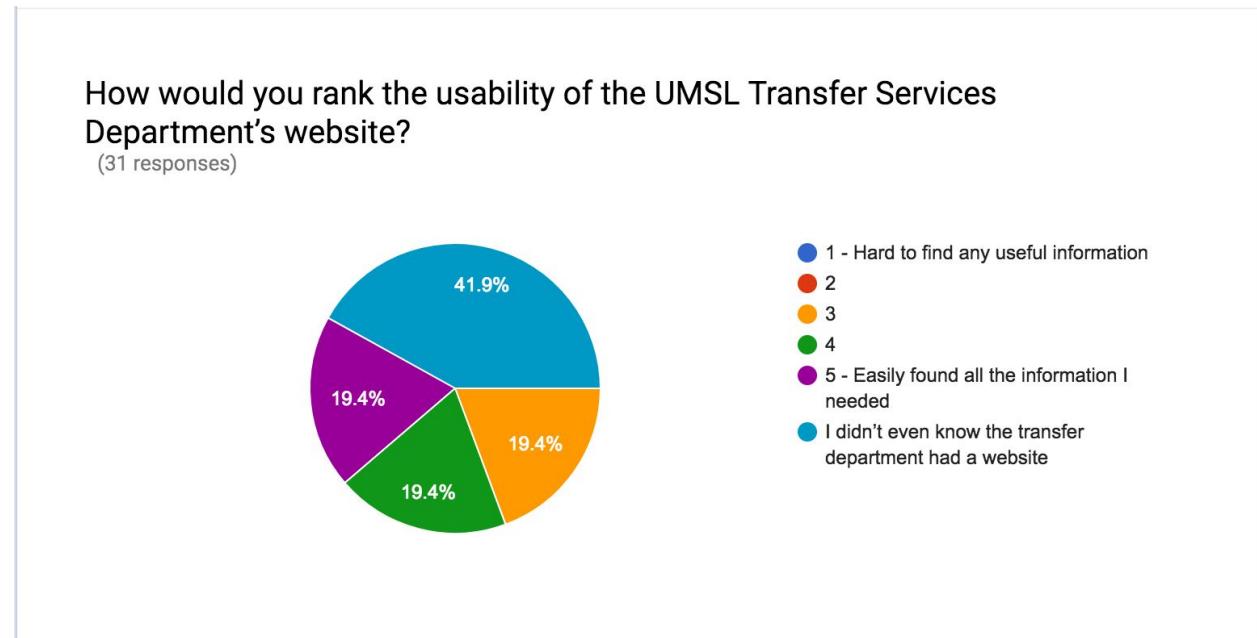
- a. 1 - Hard to find any useful information
- b. 2
- c. 3
- d. 4
- e. 5 - Easily found all the information I needed
- f. I didn't even know the transfer department had a website

## Responses

1. 5 - Easily found all the information I needed
2. I didn't even know the transfer department had a website
3. I didn't even know the transfer department had a website
4. 3

- 
- 5. I didn't even know the transfer department had a website
  - 6. 5 - Easily found all the information I needed
  - 7. 5 - Easily found all the information I needed
  - 8. I didn't even know the transfer department had a website
  - 9. I didn't even know the transfer department had a website
  - 10. I didn't even know the transfer department had a website
  - 11. I didn't even know the transfer department had a website
  - 12. I didn't even know the transfer department had a website
  - 13. 5 - Easily found all the information I needed
  - 14. 3
  - 15. 4
  - 16. 4
  - 17. 3
  - 18. 3
  - 19. 4
  - 20. 3
  - 21. I didn't even know the transfer department had a website
  - 22. I didn't even know the transfer department had a website
  - 23. I didn't even know the transfer department had a website
  - 24. I didn't even know the transfer department had a website
  - 25. I didn't even know the transfer department had a website
  - 26. 5 - Easily found all the information I needed
  - 27. 5 - Easily found all the information I needed
  - 28. 3
  - 29. 4
  - 30. 4
  - 31. 4

## Chart to display results



## Question 5

How would you rank the amount of useful information available on the UMSL Transfer Services Department's website?

- a. 1 - There was hardly any useful information on the website
- b. 2
- c. 3
- d. 4
- e. 5 - The website had all the information I needed
- f. I didn't even know the transfer department had a website

## Responses

- 1. 5 - The website had all the information I needed
- 2. I didn't even know the transfer department had a website
- 3. I didn't even know the transfer department had a website
- 4. 3
- 5. I didn't even know the transfer department had a website

- 
6. 5 - The website had all the information I needed
  7. 5 - The website had all the information I needed
  8. I didn't even know the transfer department had a website
  9. I didn't even know the transfer department had a website
  10. I didn't even know the transfer department had a website
  11. I didn't even know the transfer department had a website
  12. I didn't even know the transfer department had a website
  13. 5 - The website had all the information I needed
  14. 3
  15. 3
  16. 4
  17. 3
  18. 3
  19. 4
  20. 3
  21. I didn't even know the transfer department had a website
  22. I didn't even know the transfer department had a website
  23. I didn't even know the transfer department had a website
  24. I didn't even know the transfer department had a website
  25. I didn't even know the transfer department had a website
  26. 4
  27. 5 - The website had all the information I needed
  28. 3
  29. 4
  30. 4
  31. 4

## Chart to display results

How would you rank the amount of useful information available on the UMSL Transfer Services Department's website?

(31 responses)

