



# Search Engine Optimization for Libraries

Day - 2

"We cannot call a digital-library or electronic publishing system a success if we cannot measure and interpret its use."

*- Peterson Bishop 1998*

# "Getting Found" Research Team



- ❖ **Scott Young**  
Digital Initiatives Librarian at Montana State University
- ❖ **Jason Clark**  
Head of Library Informatics & Computing at Montana State University Library
- ❖ **Patrick O'Brien**  
Semantic Web Research Director at Montana State University Library
- ❖ **Kenning Arlitsch**  
Dean of the Library at Montana State University. His book, co-authored with Patrick O'Brien, is titled Improving the Visibility and Use of Digital Repositories through SEO, and was published in February 2013.



INSTITUTE *of*  
**Museum** and **Library**  
SERVICES

"Getting Found: Search Engine Optimization  
for Digital Repositories"

*- IMLS 3 Year Research Grant*

# Homework

Traditional SEO

SEO Course Moodle instance

<http://www.classes.ala.org/course/view.php?id=537>



# Recommendations & Priorities

## 1. Institutionalize SEO

- ◆ Strategic Plan
- ◆ Accurate Measurement Tools

## 2. Traditional SEO

- ◆ Get Indexed = Index Ratio
- ◆ Get Visible = Search Engine Results Page (SERP)

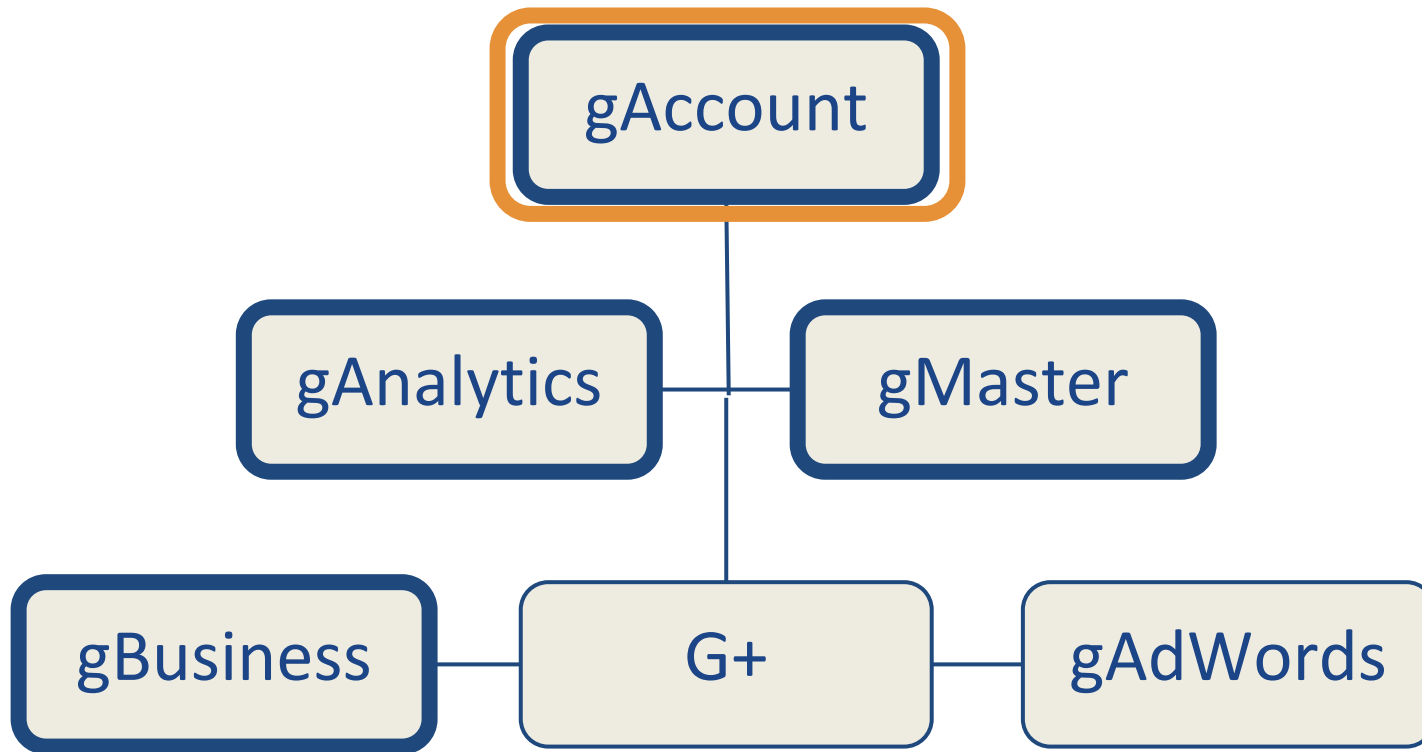
## 3. Semantic SEO

- ◆ Get Relevant = Click Through Ratios (CTR)
- ◆ Metadata
- ◆ Linked Open Data (LOD)
- ◆ Schema.org

# Recommended Process Measurement & Evaluation

1. Single Google Account for your Institution
2. Establish baseline metrics
  - ◆ Google Analytics (gAnalytics)
  - ◆ Google Webmaster Tools (gMaster)
3. Activate Google Services
  - ◆ Google MyBusiness (gBusiness)
  - ◆ Google+ (G+)
  - ◆ Google AdWords (gAdWords)

# Google Platform



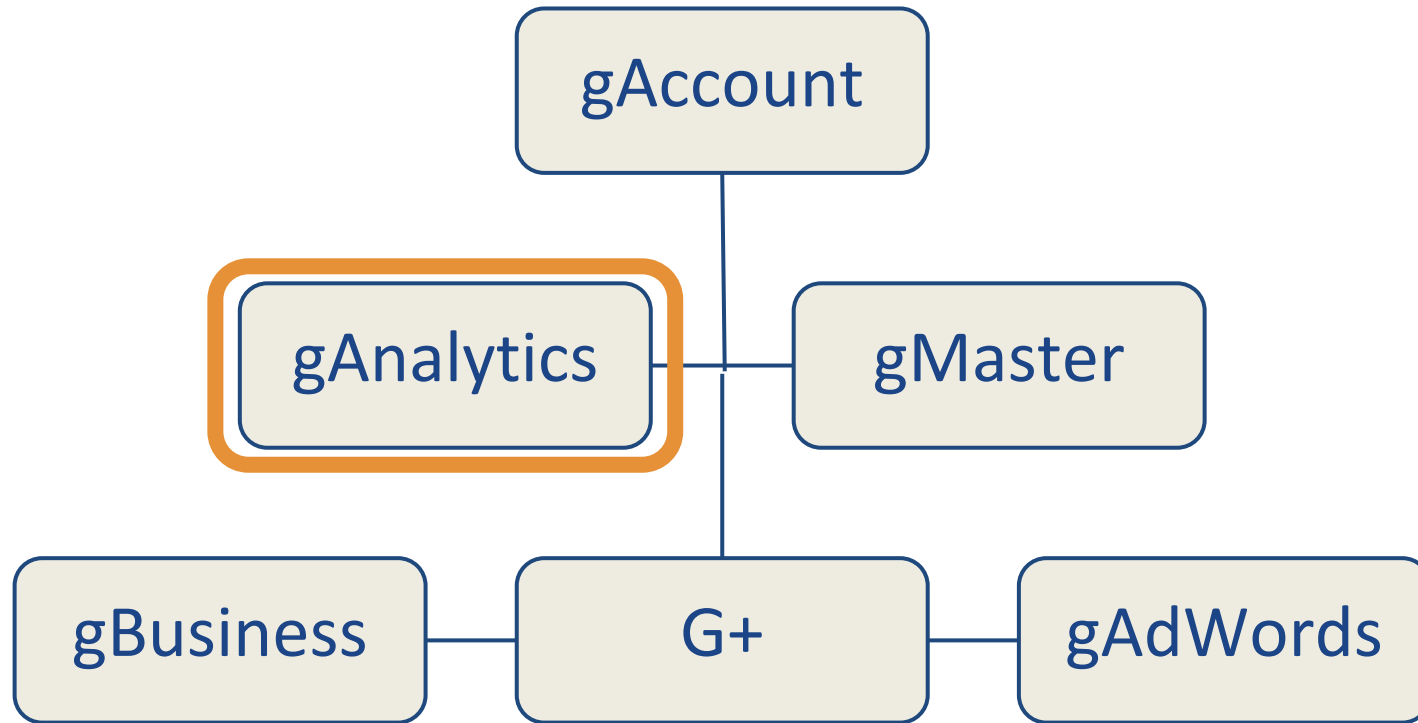
## Key

covered today

# Recommendations for Institutional gAccount

- ❖ Name: founder / building name
  - ◆ Roland Renne
- ❖ UserName: unique & easy to remember
  - ◆ [msu.renne.seo@gmail.com](mailto:msu.renne.seo@gmail.com)
- ❖ Password: considerations
  - ◆ Strong & [Two Step Authentication](#)
  - ◆ Recovery Email & Text
    - different Admin or an internal email list
- ❖ Birthday: easy to remember ideas
  - ◆ 18+ years old
  - ◆ Last Renovation, Addition, etc.

# Google Platform



# gAnalytics Key Admin Areas

Administration  
MSU - library web site

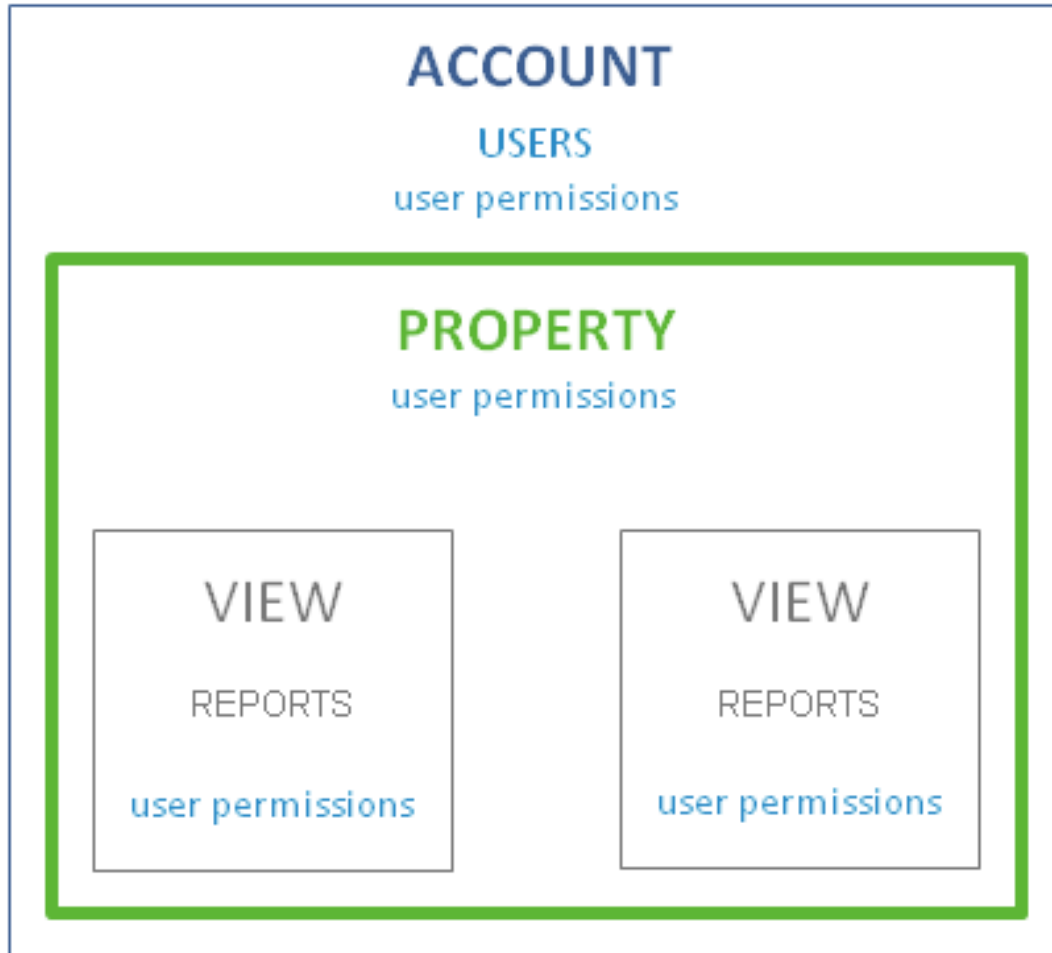
ACCOUNT	PROPERTY	VIEW
MSU - library web site	MSU - lib.montana.eud	0-Public Only Use (Exclude...

ACCOUNT	PROPERTY	VIEW
Account Settings	Property Settings	View Settings
User Management	User Management	User Management
AdSense Linking	.js Tracking Info	Goals
All Filters		Content Grouping
Change History		Filters
	<b>PRODUCT LINKING</b>	Channel Settings
	AdWords Linking	Ecommerce Settings
	All Products	
	Remarketing	<b>PERSONAL TOOLS &amp; ASSETS</b>
	Custom Definitions	Segments
	Data Import	Annotations
	Social Settings	Attribution Models

Orange arrows indicate the flow from Account to Property to View settings, and from Account to User Management, AdSense Linking, and All Filters.

# gAnalytics Key Concepts



- ❖ Add Users to an Account
- ❖ Users get permissions
  - ↓ Account
  - ↓ Property
  - ↓ View
- ❖ Permissions flow down Account -> View

# Account Filters Include or Exclude User Activity

- ❖ Key Points
  - ◆ Built at Account level
  - ◆ Applied at the View level
  - ◆ Once applied the data can not be recovered
- ❖ Recommended
  - ◆ Exclude Library Staff IP Address
- ❖ Suggested
  - ◆ Campus vs Non-Campus Access via IP



# Google Analytics Key Areas

Administration

MSU - library web site

ACCOUNT

MSU - library web site

PROPERTY

MSU - lib.montana.eud

VIEW

0-Public Only Use (Exclude...

Account Settings

User Management

AdSense Linking

All Filters

Change History

Property Settings

User Management

.js Tracking Info

PRODUCT LINKING

AdWords Linking

All Products

Remarketing

Custom Definitions

Data Import

Social Settings

View Settings

User Management

Goals

Content Grouping

Filters

Channel Settings

Ecommerce Settings

PERSONAL TOOLS & ASSETS

Segments

Annotations

Attribution Models

# Property groups information

- ❖ Usually created for each domain
  - ◆ [www.lib.montana.edu](http://www.lib.montana.edu)
  - ◆ [arc.lib.montana.edu](http://arc.lib.montana.edu)
  - ◆ [scholarworks.montana.edu](http://scholarworks.montana.edu)
- ❖ Best-practice
  - ◆ Don't use the www.
  - ◆ lib.montana.edu aggregates
    - [www.lib.montana.edu](http://www.lib.montana.edu)
    - [arc.lib.montana.edu](http://arc.lib.montana.edu)
    - [guides.lib.montana.edu](http://guides.lib.montana.edu)

# Property Settings

- ❖ Industry Category = Reference
- ❖ After gAnalytics Implemented
  - ◆ Activate Webmaster Tools site
  - ◆ Consider "enhanced link attribution" for [event tracking](#) of non-HTML downloads
- ❖ Privacy Issues - Do NOT Use
  - ◆ Enable Demographics and Interest Reports

# .js Tracking Info

- ❖ Upgrade to [Universal Analytics](#)
  - ◆ ga.js = legacy gAnalytics
  - ◆ analytics.js = Universal Analytics
- ❖ Improve Privacy
  - ◆ Add [IP Anonymization](#)
- ❖ Privacy Issues - Do NOT Use
  - ◆ User-ID

# Universal Analytics js.Tracking code

<script>

```
(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){  
(i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o),  
m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)  
})(window,document,'script','//www.google-analytics.com/analytics.js','ga');
```



ga('create', 'UA-XXXX-Y', 'auto'); // Creates a tracker.

➔ ga('set', 'anonymizeIp', true);

ga('send', 'pageview'); // Sends a pageview.

</script>

</head>

<body>

# Google Analytics Key Areas

Administration  
MSU - library web site

ACCOUNT	PROPERTY	VIEW
MSU - library web site	MSU - lib.montana.eud	0-Public Only Use (Exclude...

- Account Settings
- User Management
- AdSense Linking
- All Filters
- Change History

- Property Settings
- User Management
- .js Tracking Info

PRODUCT LINKING

- AdWords Linking
- All Products
- Remarketing
- Custom Definitions
- Data Import
- Social Settings

VIEW SETTINGS

- User Management
- Goals
- Content Grouping
- Filters
- Channel Settings
- Ecommerce Settings

PERSONAL TOOLS & ASSETS

- Segments
- Annotations
- Attribution Models

# Views are applied to a Property

- ❖ Best-practice
  - ◆ Create 2 Views for each Property
    - Raw Data - no filters - Admin Access Only
    - Public Only Use (Excludes staff computers)
  - ◆ Site search Tracking = On
- ❖ 0-Public Only Use (Excludes staff computers)
  - ◆ Apply "Exclude Staff IP Filter" to View

## MSU - library web site



### ACCOUNT

MSU - library web site

Account Settings

User Management

AdSense Linking

All Filters

Change History

### Edit Filter

#### Filter Information

Filter Name

Filter Type ☒ Predefined filter ☐ Custom filter

Exclude

traffic from the IP addresses

that begin with

IP address

☐ IPv6

(e.g. 74.125.19.103 or 2001:db8::1)

#### Apply Filter to Views

##### Available Views

0-www.lib.montana.edu  
1-MSU-All-Domains  
1-MSU-ScholarWorks  
1-Test-MSU-All-Domains  
1-Test-MSU-Friends  
1-Test-MSU-LibGuides  
1-Test-MSU-Summon  
1-z\_Raw Data-DO NOT ALTER  
1-z\_Raw Data-DO NOT ALTER  
1-z\_Raw Data-DO NOT ALTER  
1-z\_Raw Data-DO NOT ALTER  
1-z\_Raw Data-DO NOT ALTER

Add »

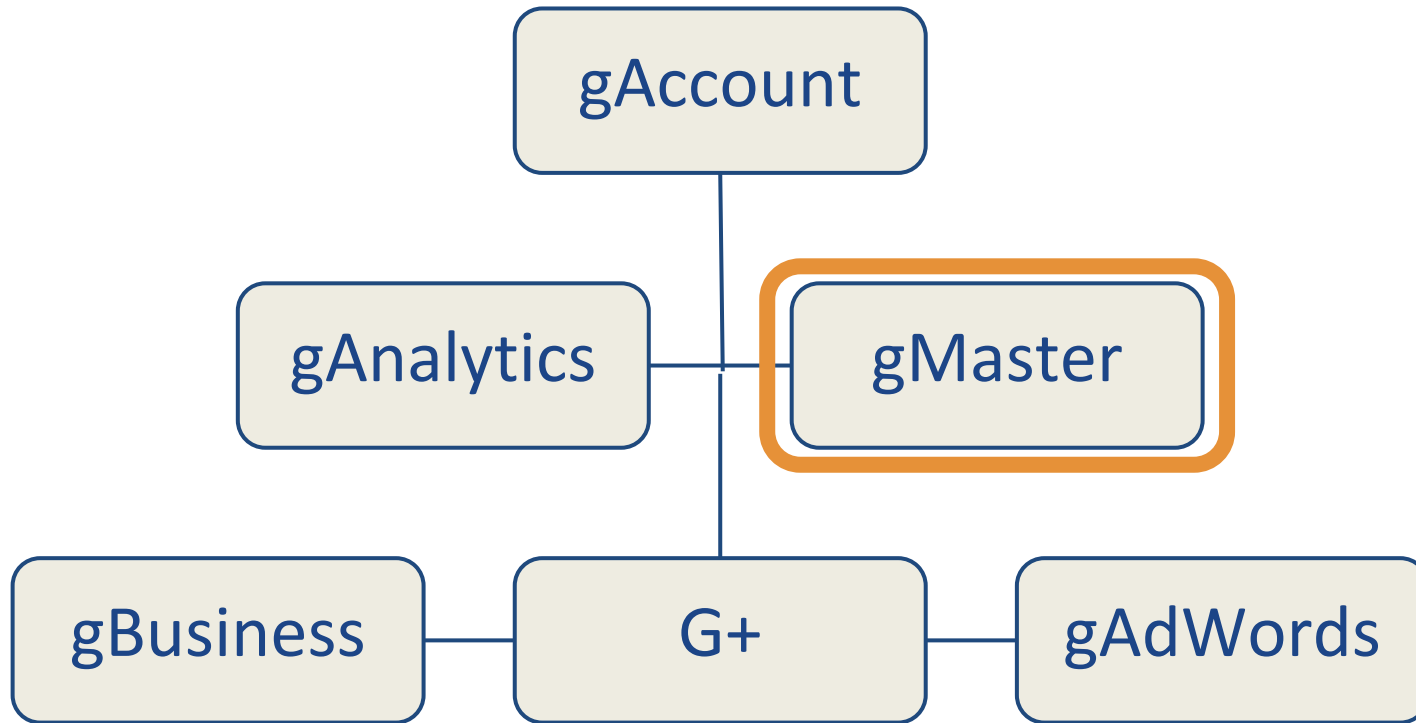
« Remove

##### Selected views

0-Public Only Use (Excludes staff comput  
0-Public Only Use (Excludes staff comput  
0-Public Only Use (Excludes staff comput  
0-Public Use Only (Excludes staff compute



# Google Platform



# Above All: Focus on user experience

- ❖ Descriptive Page Titles, anchor text, descriptions, etc.
- ❖ External linking
- ❖ Easy & Intuitive Site Navigation
- ❖ Submit sitemaps/configure robots.txt file
- ❖ Monitor & address errors
- ❖ Inform staff & assign ownership
- ❖ Upgrade repository software
- ❖ Optimize web server performance

# gMaster

- ❖ Activate gMaster via [gAnalytics Verification](#)
- ❖ [Add / remove users](#) to the gMaster account
- ❖ Focus on
  - ◆ Eliminating Crawl Errors
  - ◆ Improving Crawler Efficiency

# gMaster Dashboard

## Webmaster Tools

 scholarworks.montana.edu

Help



### Site Dashboard

Site Messages (12)

► Search Appearance 

► Search Traffic

► Google Index

► Crawl

Security Issues

Other Resources

► Labs

## New and important

Your site <http://scholarworks.montana.edu/> is now linked to a Google Analytics web property.

Jun 20, 2014

[View all](#)

## Current Status

### Crawl Errors



#### Site Errors

DNS



Server  
connectivity



Robots.txt  
fetch



#### URL Errors

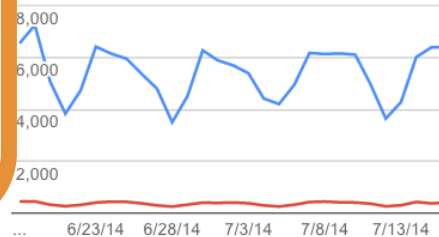
1 Server error  
0 Soft 404  
289 Not found

### Search Queries




4,559 queries

157,006 impressions  
10,802 clicks



### Sitemaps

All (1) 

3,116 URLs submitted  
2,589 URLs indexed

158 warnings



# Eliminate Crawl Errors

- ❖ Server Errors
  - ◆ See [HTTP 5XX](#)
- ❖ Page Not found
  - ◆ [HTTP 404](#)
  - ◆ Provide a [useful 404 Page](#)
  - ◆ [Use 301 Redirects](#)
- ❖ [Soft 404](#)

# gMaster Dashboard

## Webmaster Tools

 scholarworks.montana.edu

Help



### Site Dashboard

Site Messages (12)

► Search Appearance 

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Your site <http://scholarworks.montana.edu/> is now linked to a Google Analytics web property.

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## Current Status

### Crawl Errors



#### Site Errors

##### DNS



##### Server connectivity



##### Robots.txt fetch



#### URL Errors

1 Server error  
0 Soft 404  
289 Not found

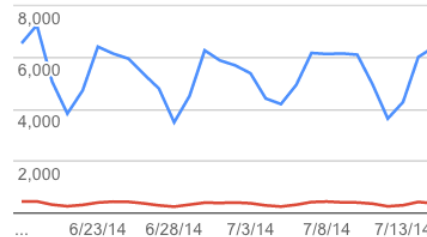
### Search Queries



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### Sitemaps

All (1)

3,116 URLs submitted  
2,589 URLs indexed

158 warnings



# Does your Index Status Make Sense?



# Sitemaps Provide Inclusion Guidance

- ❖ Link a human readable HTML sitemap from homepage
- ❖ Implement machine-readable XML file(s) to provide SE content inclusion direction
  - ◆ "sitemapindex"
  - ◆ "sitemap" file(s)
- ❖ “Google adheres to Sitemap Protocol 0.9 as defined by sitemaps.org.”



# Robots.txt provide crawlers guidance to reduce Index "noise"

- ❖ Text file at top level / root of web site
- ❖ Provides SE exclusion guidance
- ❖ [Test your robots.txt](#) file

```
Disallow: /staff/
```

```
#allow primary mobile page
```

```
Allow: /finding-aids/m/index.php
```

```
Allow: /finding-aids/m/$
```

# Canonicalization & HTML directive markup helps reduce duplicate content

## ❖ HTML <head> tags

### ◆ Reduce duplication

```
<link rel="canonical" href="http://arc.lib.montana.edu/finding-aids/item/23" />
```

### ◆ Page Level Crawler Guidance

```
<meta name="robots" content="nofollow,noindex" />
```

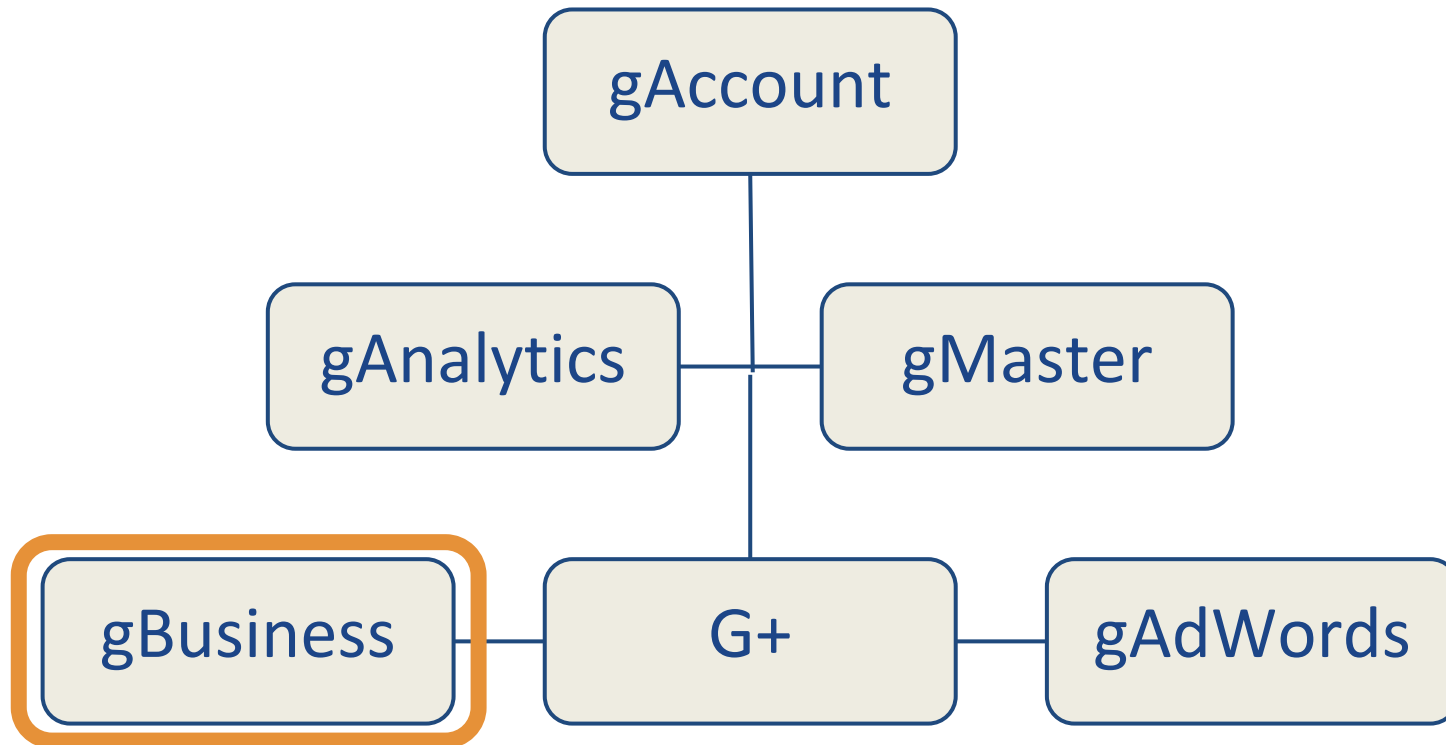
## ❖ HTML <body> tags

### ◆ Improve Crawler Efficiency

```
<a rel="nofollow" href="http://www..lib.montana.edu/login.html">User Login</a>
```



# Google Platform



# One way of getting to gBusiness

## Webmaster Tools

Site Dashboard	
Site Messages (12)	
▶ Search Appearance ⓘ	
▶ Search Traffic	
▶ Google Index	
▶ Crawl	
Security Issues	
<b>Other Resources</b>	
▶ Labs	

Other resources	
<a href="#">Structured Data Testing Tool</a>	Use the Structured Dat
<a href="#">Structured Data Markup Helper</a>	Not sure how to start w
<a href="#">Email Markup Tester</a>	Validate the structured
<a href="#">Google Places</a>	97% of consumers sea platform from Google.
<a href="#">Google Merchant Center</a>	The place to upload yo
<a href="#">PageSpeed Insights</a>	Use PageSpeed Insign
<a href="#">Custom Search</a>	Harness the power of C

### A.K.A.

- Google Business
- Google MyBusiness

# Claim, consolidate and standardize listings

## 1. Create list for all variations

- a. Name of library
- b. Name of library building
- c. All library phone numbers

## 2. Search

- a. gMaps
- b. gBusiness
- c. G+

# Claim, consolidate and standardize listings

## 3. Login gBusiness

- a. Use Institutional gAccount
- b. Claim ownership every variation found

## 4. Review each gBusiness listing

- a. Find G+ "pre-approved custom URL"
- b. Consolidate under gBusiness w/ "pre-approved custom URL"

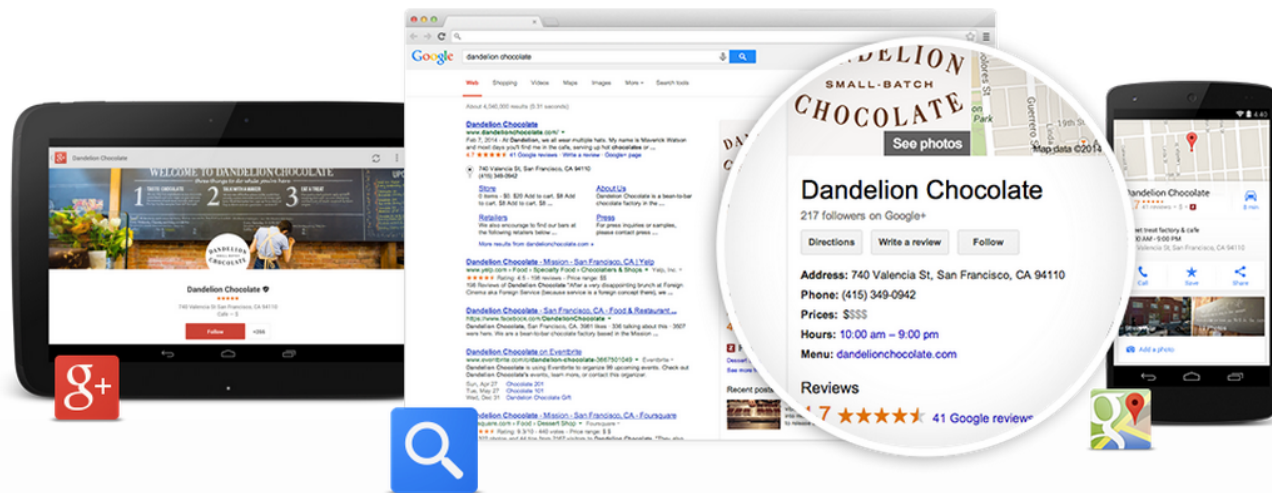
## 5. Complete and standardize consolidated gBusiness and G+ profiles

- a. Name
- b. Address
- c. Phone Number(s)

## Get your business on Google for free

**New** – Google My Business connects you directly with customers, whether they're looking for you on Search, Maps or Google+.

[Get on Google](#)



Show up across Google

Give customers the right info

Build lasting relationships



roland r renne library

## Roland R Renne Library

Malone Centennial Mall  
Bozeman, Mt 59717

Open today 7:00 am – 9:00 pm



Directions



Save

[lib.montana.edu](http://lib.montana.edu)

(406) 994-3119



Street View

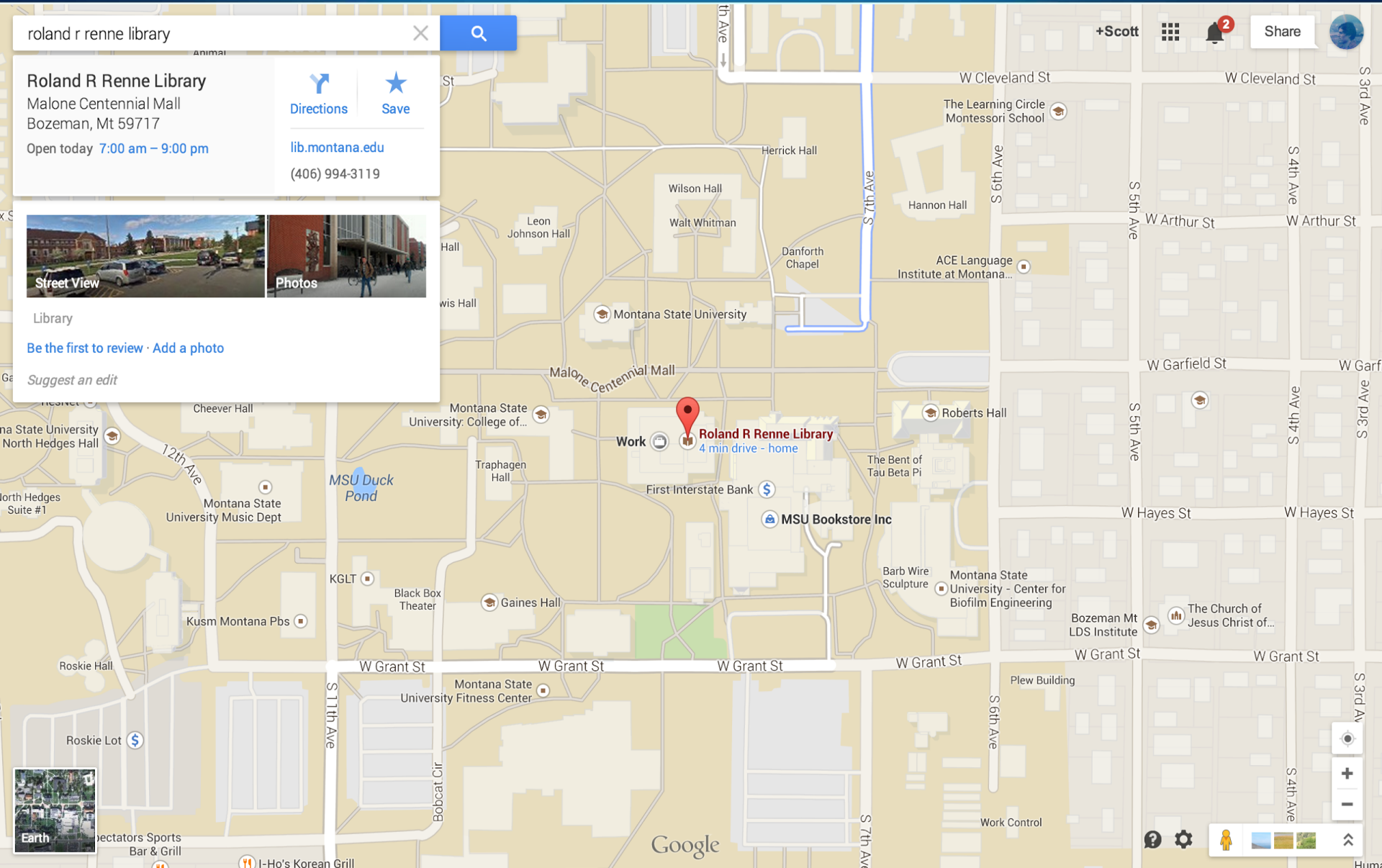


Photos

Library

[Be the first to review](#) · [Add a photo](#)

[Suggest an edit](#)

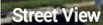


✕ 🔍




[lib.montana.edu](http://lib.montana.edu)

(406) 994-3139



Be the first to review · Add a photo

Quick facts · Montana State University Library is the academic libra...

- North Hedges Hall

big sky conference  
· school of nursing

Montana State University Library  
5 min drive - home

5 min drive - home

First Interstate Bank 

MSU Bookstore 

The Learning Circle  
Montessori School

ACE Language  
Institute at Montana...


 Roberts Hall

## The Bent of Tau Beta Pi

### Barb Wire Sculpture

Montana State  
University - Center for  
Biofilm Engineering

Bozeman Mt  
LDS Institute

 The Church of  
Jesus Christ of...

Plew Building

## Work Control



Share




Digitized by Google




## Mountains & Minds

Your pages

Get your page




0




scottyeatcereal

Manage this page

0 Followers | - Last post



0




Roland R Renne Library


Malone Centennial Mall Bozeman, Mt 59717

Manage this page

0 Followers | - Last post



1



Montana State University Library

Montana State University Library Bozeman, MT ...

Manage this page

783 Followers | - Last post

## Your pages

Get your page

Create a personal Google+ profile to get the full Google+ experience.

Create profile

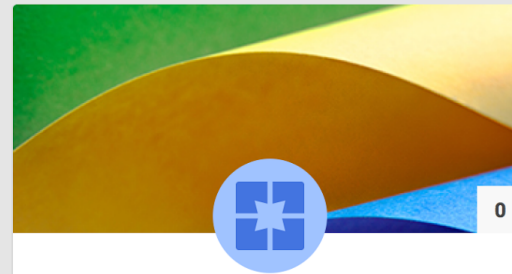


Montana State University Library  
1500 University Dr, Billings, MT 59101

Manage this page

0  
Followers

-  
Last post



Montana State University Library  
Renne Library Bozeman, Mt 59717

Manage this page

0  
Followers

-  
Last post





## Montana State University Library

Renne Library Bozeman, Mt 59717

+1 406-994-3139

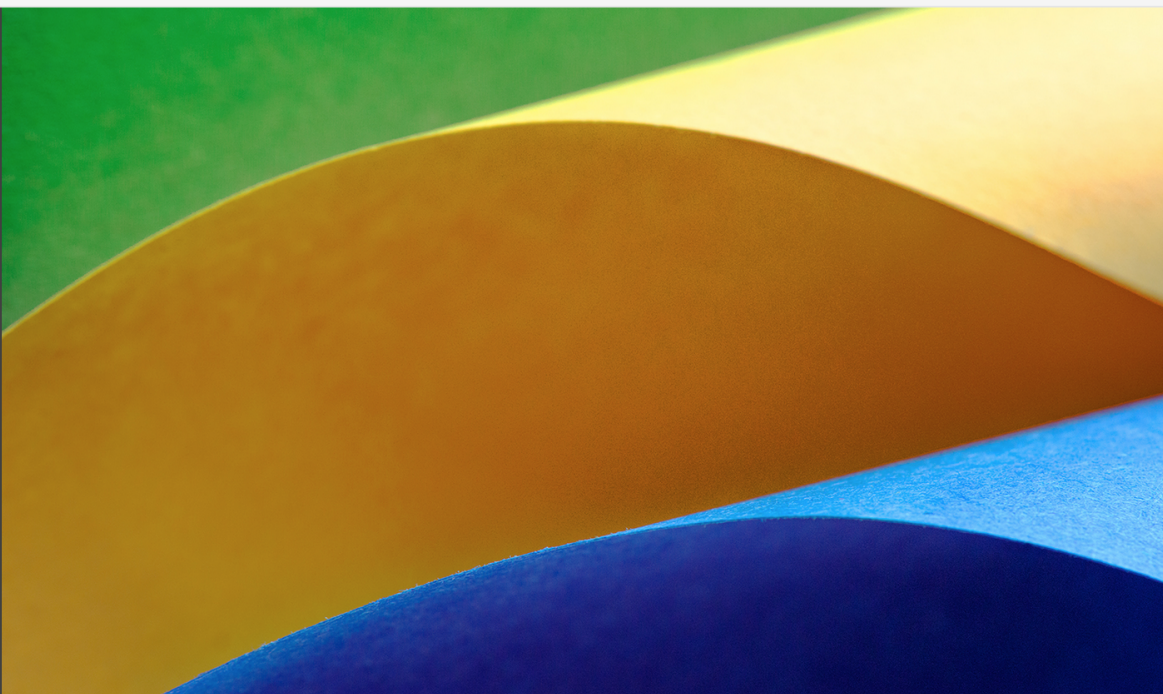
[lib.montana.edu](http://lib.montana.edu) ✓

Library

Today 7:00 am – 5:00 pm

[+ Follow](#)

63,492 views



[About](#)

[Posts](#)

[Photos](#)

[Videos](#)



Montana State University Library

Bozeman, Mt



+Scott



You are a manager of this page.

[Manage this page](#)

Local ▾



## Roland R Renne Library

Malone Centennial Mall Bozeman, Mt 59717  
+1 406-994-3119  
[lib.montana.edu](http://lib.montana.edu)

Library  
Today 7:00 am – 5:00 pm

Follow

23,903 views



About

Posts

Photos

Videos

Search

roland r renne

any

/common/topic x

Constrain results by type...

Options: Scoring entity | ☒ Prefixed

## Search Results

NO IMAGE

**Montana State University Library** /m/0j3y9r1*Land-grant university, Employer, Educational Institution, Organization, Location***alias:** MSU Library, Renne Library

Montana State University Library is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. In 1978, the... [\[Wikipedia\]](#)

NO IMAGE

**Roland Renne** /m/0b767l9*Deceased Person, Person*

Roland R. Renne, an Agricultural Economics Professor, served as President of Montana State College from 1943-1964. Dr. Renne was also active in Washington D.C. and United States overseas agricultural economics work. He was the 1964 Democratic... [\[Wikipedia\]](#)

Topic

# Montana State University Library<sup>en</sup>

Created by wikirecon\_bot on 9/10/2013

**mid:** /m/0j3y9r1 **notable type:** /education/educational\_institution **on the web:**  wikipedia.org ▾

Montana State University Library is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. In 1978, the library was named the Roland R. Renne Library to honor the sixth president of the university. The library supports the research and information needs of Montana's students, faculty, and the Montana Extension Service.

[Wikipedia](#) [ - ]

Properties

l18n

Keys


Links



View and edit specific domains, types, or properties.

**Filter options:** ☐ Show all domains and properties

**Common** /common

 Freebase Commons

**Topic** /common/topic

X

**Also known as** /common/topic/alias

**Also known as** ▾

MSU Library

Renne Library

**Description** /common/topic/description

Montana State University Library is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. In 1978, the library was named the Roland R. Renne Library to honor the sixth president of the university. The library supports the research and information

▼ **Types:**

Common

Topic

Education

Educational Institution

Location

Location

Business

Employer

Organization



**Web**

Images

Shopping

Videos

News

More ▾

Search tools

About 1,860 results (0.38 seconds)

## Roland Renne - Wikipedia, the free encyclopedia

[en.wikipedia.org/wiki/Roland\\_Renne](https://en.wikipedia.org/wiki/Roland_Renne) ▾ Wikipedia ▾

**Roland R. Renne** (1905–1989), an Agricultural Economics Professor, served as .... College, the Montana State University named Renne **Library** in his memory.

## Montana State University **Library** - Wikipedia, the free ...

[en.wikipedia.org/wiki/Montana\\_State\\_University\\_Library](https://en.wikipedia.org/wiki/Montana_State_University_Library) ▾ Wikipedia ▾

It is the flagship **library** for all of Montana State University System's campuses. In 1978, the **library** was named the **Roland R. Renne Library** to honor the sixth ...

## Montana State University - Wikipedia, the free encyclopedia

[en.wikipedia.org/wiki/Montana\\_State\\_University](https://en.wikipedia.org/wiki/Montana_State_University) ▾ Wikipedia ▾

These included the 1949 **Library** Building (now Renne **Library**), the campus' first dedicated ..... University College; College of Graduate Studies; **Roland R. Renne Library** ... Center for Biofilm Engineering; Center for **Bio**-Inspired Nanomaterials ... You've visited this page 5 times. Last visit: 7/16/14

Web

Books

Maps

Images

Shopping

More ▾

Search tools

About 3,790,000 results (0.20 seconds)

## MSU Libraries

[www.lib.msu.edu/](http://www.lib.msu.edu/) ▾ Michigan State University Libraries ▾

Research collections include Africana, fine arts, government documents and international studies, labor and industrial relations, agricultural economics, ...

### Electronic Resources

... Subject Librarians · About Us ·  
MSU » MSU Libraries ...

### Hours

Library Hours. Be sure to check out  
the MSU Libraries' Event ...

### Your Library Account

Problems? Your Library Account –  
Frequently Asked Questions ...

[More results from msu.edu »](#)

### Catalog

Example : california near university.  
Field limits, A field ... Check ...

### Find Books

What Can I Find in the Library  
Catalog? Books and e-books ...

### Resources

Resources. This section contains  
links to Michigan State ...

## See results about

### Montana State University Library

Montana State University Library is the academic library of  
Montana State University, Montana's land-...



### Michigan State University Libraries (Public Library)

Michigan State University Libraries comprise the 29th largest academic  
library system in North America ...

[Feedback](#)

## Montana State University MSU Library

[www.lib.montana.edu/](http://www.lib.montana.edu/) ▾ Montana State University Library ▾

Montana State University (**MSU**) **Library** is here to help students, faculty, and the  
people of Montana with their quest for information and research.

Center for Biofilm Engineering

**Montana State University -  
Center for Biofilm  
Engineering**

366 EPS Bldg  
Bozeman, Mt 59717

 [Directions](#)

 [Save](#)

[biofilm.montana.edu](http://biofilm.montana.edu)  
(406) 994-4770

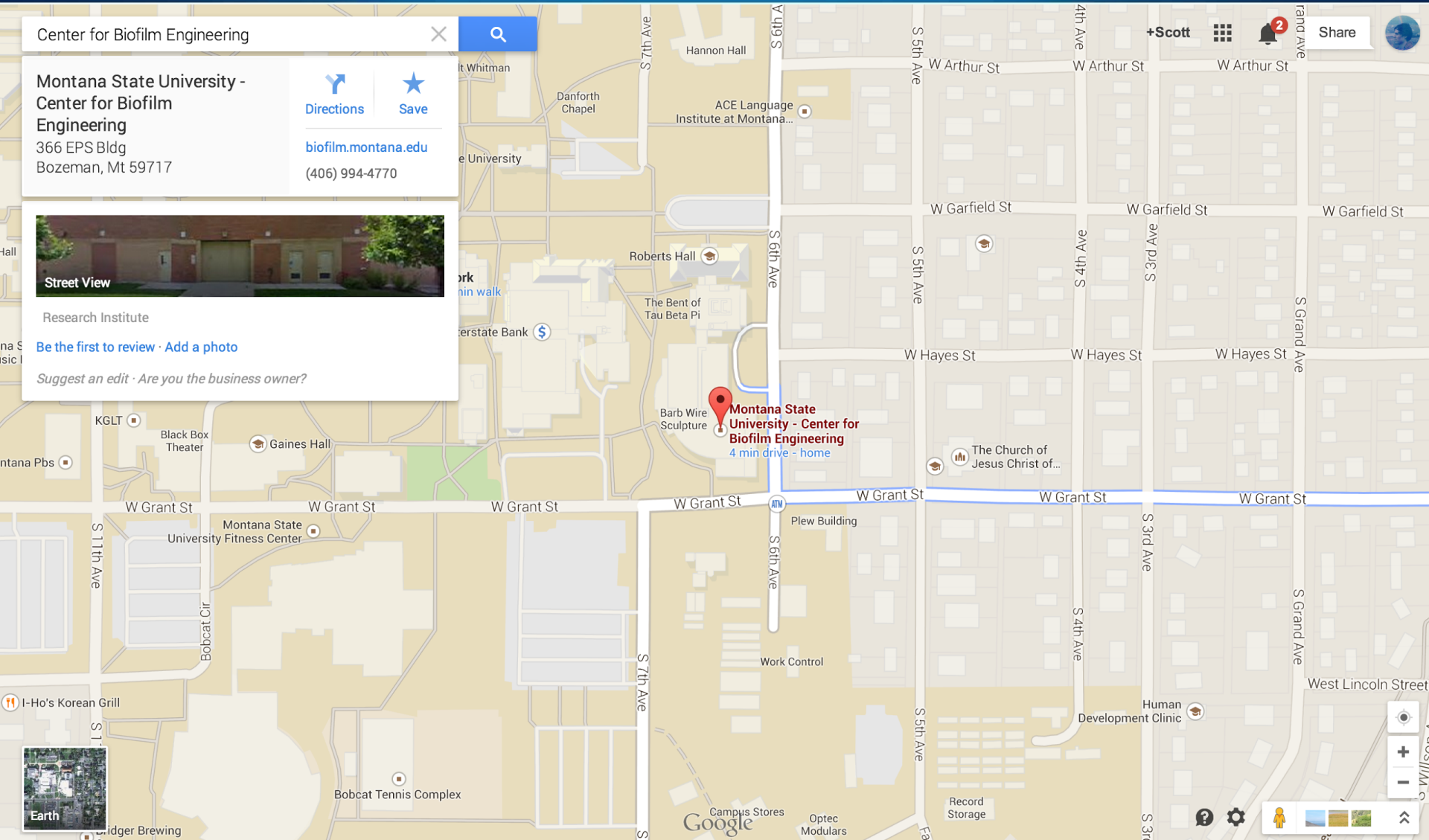


Street View

Research Institute

[Be the first to review](#) · [Add a photo](#)

[Suggest an edit](#) · [Are you the business owner?](#)





## My Business | Confirm your business

We need to create a Google+ page so you can manage your business on Google. Please confirm this information:

**Montana State University - Center for Biofilm Engineering**

366 EPS Building

Bozeman, MT 59717-3980

(406) 994-4770

☐ I am authorized to manage this business and I agree to the [Terms of Service](#).

Back

Continue

# Homework

## Institutional Setup & Identity

<https://docs.google.com/document/d/1HWVOkPn9UJXLeY3CV14cEPQKQtvgh6yA6T6uXK6-iAw/edit>

## SEO Course Moodle instance

<http://www.classes.ala.org/course/view.php?id=537>