

Advanced Research Methodologies

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Product Manager
iGroup

OBJECTIVE

**Improve your Research
Knowledge and Skills**

Advanced???

- **Comprehensive**
- **Detailed**
- **Thorough**
- **Systematic**
- **Meticulous**

What is Advanced Research???

- Able to see everything on your TOPIC
- Complete....do not miss anything
- Search all TYPES of RESOURCES for Answers
 - Journals
 - Reference Books
 - Standards
 - Dissertations
 - Proceedings
 - Patents

**CAN WE USE PRINT
INSTEAD OF ONLINE???**

How CAN you EFFECTIVELY Search THOUSANDS of

- **Articles**
- **Journals**
- **Books**
- **Dissertations**
- **Etc.**

USING PRINT???

PRINT

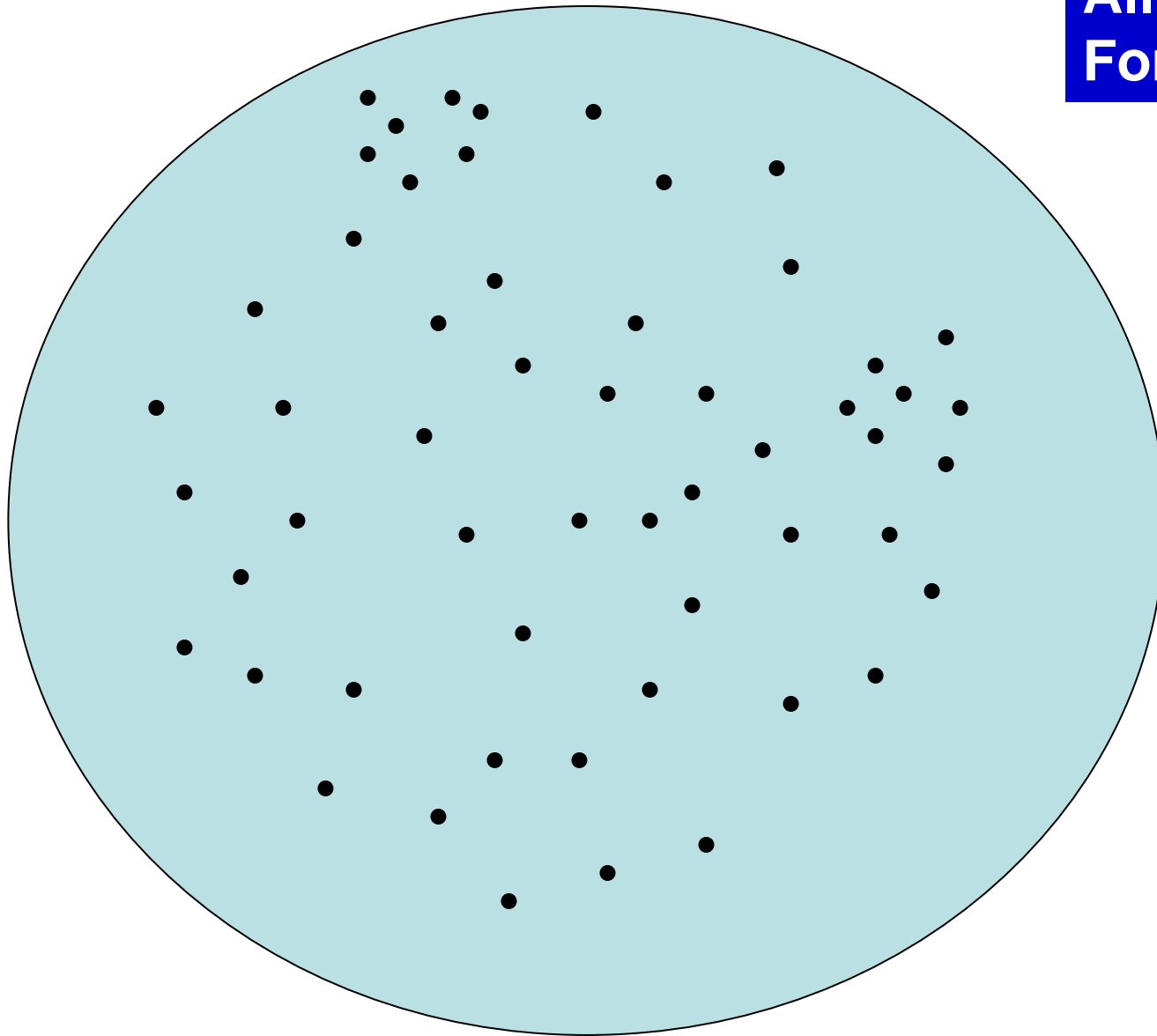
- **Easy for Reading**
- **Good for Selecting by Title**
- **Good for AFTER you IDENTIFY your Article.**

What is the First
STEP???

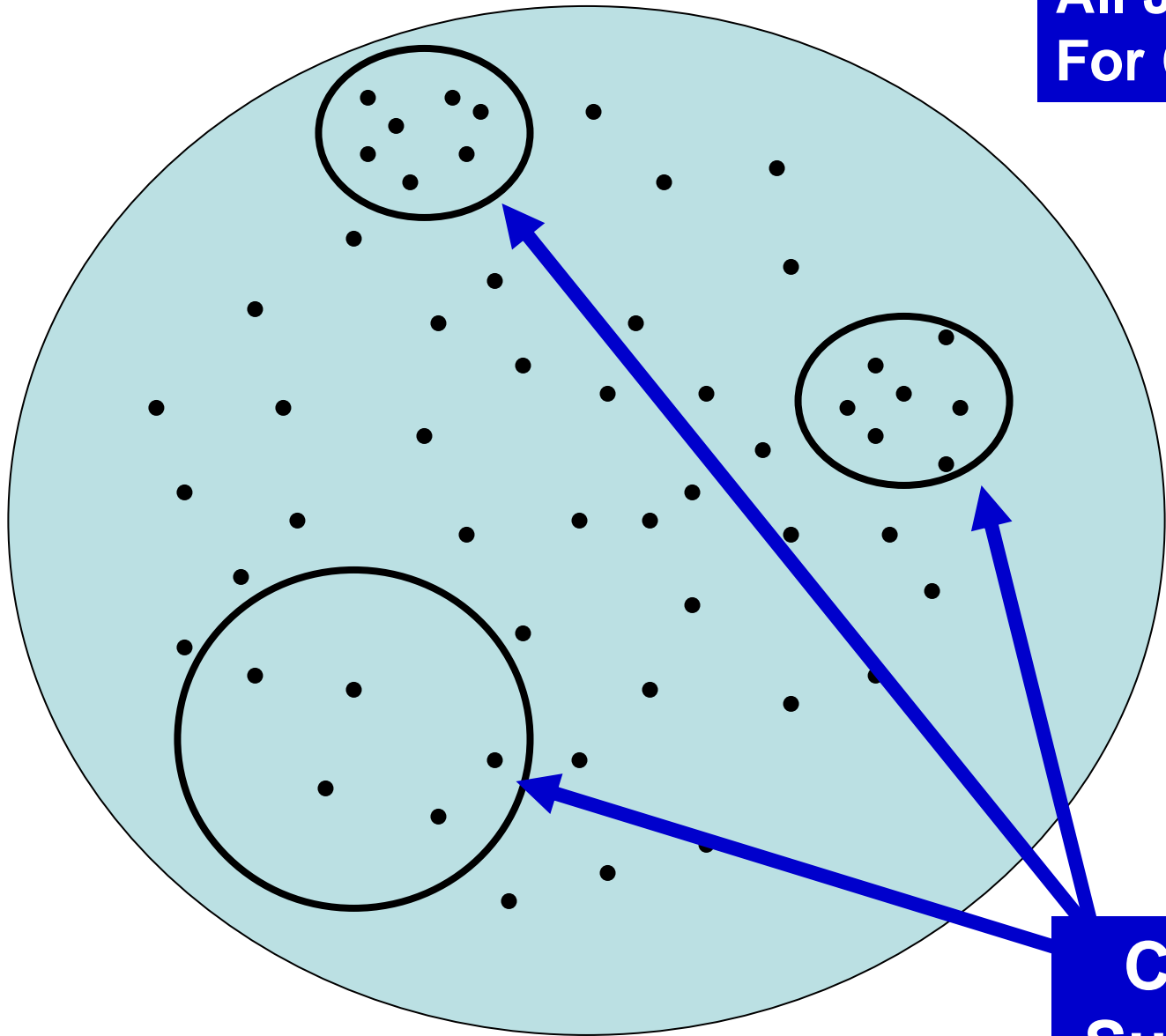
Ensure Research
IS COMPLETE!!!

FORGET ABOUT FULL TEXT!!!

**All Journals
For Cell Biology**



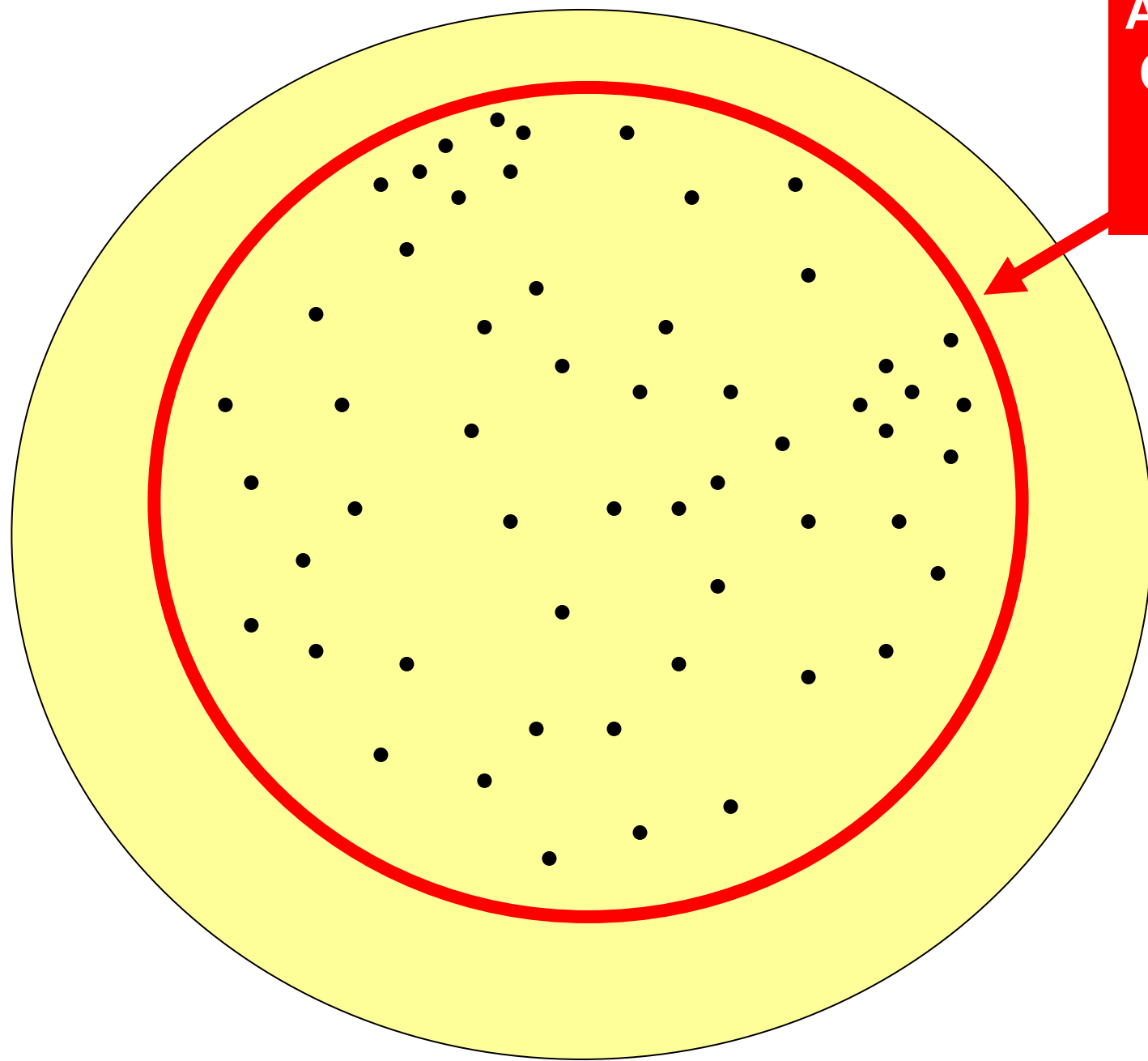
**All Journals
For Cell Biology**



**CURRENT
Subscription**

**RESEARCH IS NOT
COMPLETE!!!**

**A&I Database
Covering All
SCIENCE
CONTENT**





Need Abstract & Index Database

ONE Database that
Covers Large % of
the **CORE CONTENT!!!!**

Abstract & Index???

- **Abstract – Detailed Summary of Article**
- **Index – each Article is identified so that it is easy to FIND**
- **Can LINK to FULL TEXT**

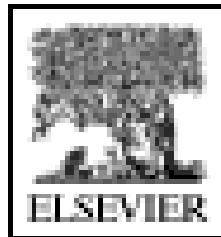
A&I Databases



NOW you can LINK or
Search the *Full Text!!!*

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Top Five Publishers



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Medium Size Publishers



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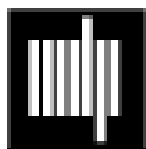


AMERICAN
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OF PHYSICS

APS
Journals

Where To GET CORE FULL TEXT???

University Publishers



The MIT Press

Project
MUSE[®]



Where To Find Info on Chemical Reactions, Formulas, Techniques, Statistical & Engineering Data, Etc.

Reference & Handbook Publishers



eBOOKS



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HOW TO SEARCH
THE DATABASES?????

Searching Methods

- **Natural Language Search**
 - General search....starting research
 - When we don't know what to search for yet
 - Retrieve a lot of Results

- **Terms & Connectors**
 - Very Precise searching method
 - To Expand Results or Focus Results

Searching "Fields"

- What field should you Search???
 - Subject
 - Keyword
 - Abstract
 - Full Text
- What do you want to do???
 - Expand Result List
 - Narrow Result List

*Lets Review the
Different Types of
Research Resources!!!!!!*

JOURNALS

- **Peer Review** - One or Two Editorial Levels to Ensure Highest Quality and Originality of Article. (*Nature, Science, Cytopathology*).
- **Non-Peer Review** – All other Periodicals used for general research and information. (*The Economist, Bangkok Post, Newsweek*)

BOOKS

- **Reference/Handbook – Factual Info/Data, Charts, Formulas, Stats, etc.** (Biomechanical Systems, Handbook of Lasers)
- **Textbooks – Course Study Materials** (Financial Accounting, Fundamentals of Chemistry)

BOOKS

- **LITERATURE – Fiction (Hamlet, Cannery Row)**
- **GENERAL – All Other Books (Nonfiction)**

OTHER SOURCES

- **Dissertations/Theses – Masters and PhD.**
Program dissertations (considered Scholarly Research)
- **Proceedings – Articles from Important Seminars or Conference (ACM, IEEE)**
- **Reviews – Articles written by Professionals that discuss other Articles, Journals and Books.**
(Reviews.Com, Ulrich)

OTHER SOURCES

- **Transactions - Important Papers from Research that needs to be published quickly (ACM, IEEE)**
- **Lecture Notes - Actual Class Notes from Prestigious Professors at Top Graduate Schools around the world.**
- **Patents – US, Japanese and Euro Patents...Scientific, Technologies and Business Models**

OTHER SOURCES

- **Standards – Engineering, Design, Testing and Innovation (ASTM, ISO, DIN...)**
- **Open Archive Initiatives – Publishers join together to Publish their archive articles for Free!!!**
- **MIT Courseware - ??????????**

MIT Courseware

- **FREE!!!!!!**
- **Over 1,100 Courses Published**
- **EASY TO USE!!!!**
 - **Course Syllabus/Outline** *(Under Grad & Grad)*
 - **Lecture Notes**
 - **Assignments**
 - **Tools**
 - **Other Resources**

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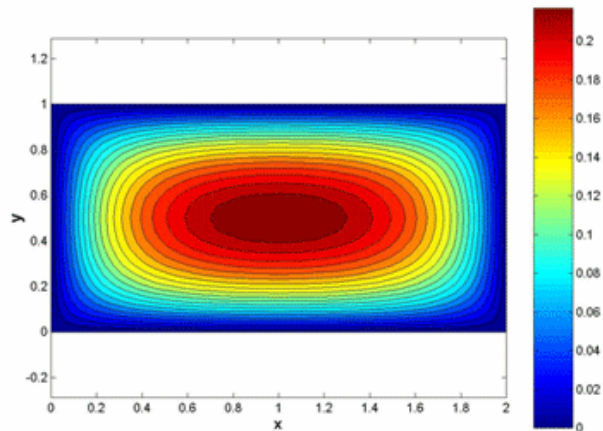
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10.34 Numerical Methods Applied to Chemical Engineering, Fall 2001



Velocity distribution inside duct, Newtonian fluid.
(Produced by Professor Kenneth Beers with Matlab® software.)

Highlights of this Course

Professor Kenneth Beers' course site features more than 40 of his [Lecture Notes](#) in PDF format, a Matlab® tutorial and a collection of Matlab®-related [Tools](#) in HTML or PDF-format labs; and an extensive list of readings under the [Related Resources](#) section of the site.

Course Description

This course focuses on the use of modern computational and mathematical techniques in chemical engineering. Starting from a discussion of linear systems as the basic

Staff

Instructor:
Prof. Kenneth Beers

Course Meeting Times

Lectures:
Two sessions / week
1.5 hours / session

Level

Undergraduate

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References 1. Thomson, JA et al. Embryonic stem cell lines derived from human blastocysts. Science 282, 1145-1147 (1998) | [Article](#) | [PubMed](#) | [ISI](#) | [ChemPort](#) | ...
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 ‡ These authors contributed equally to this work

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