

Grinnell College
Windsor Science Library
Architectural Program
Noyce Science Center, Phase II

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Ad Hoc Windsor Science Library Planning Group:

Arnold Adelberg, Department of Mathematics and
Computer Science

Gail Bonath, Associate Librarian of the College

Charles Cunningham, Department of Physics

Kevin Engel, Science Librarian

Christopher McKee, Librarian of the College

Kenneth ShoDepartment of Psychology

Lee Sharpe, Department of Chemistry

James Swartz, Academic Vice-President and
Dean of the College

Bruce Voyles, Department of Biology; Chair, Division of Scien

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Introduction

In Phase II of the Noyce Science Center Grinnell College seeks to desire: A new science library holding all library materials--periodicals, government documents, microforms, electronic resources, and audiovisual materials from the five departments of the Division of Science housed in the Noyce Science Center: Chemistry, Mathematics and Computer Science, Psychology, and Physics.

At this time such materials are divided between the Windsor Science Library and the Windsor Science Library primarily on the arbitrary and pragmatic basis of available space and little disciplinary justification. Indeed, it almost always hinders research, because the science materials housed in Burlington Library are uncomparable to what the situation would be if there existed a single science library on campus.

Because Grinnell is a liberal arts college, encouraging students which embrace course work in all three major divisions of the college (Social Science) and promoting interdisciplinary study, Windsor Science Library is seen as a private club for science majors, but as a library facility which welcomes all members of the college community for study and research.

At the same time that the new science library will be broadly welcomed, we recognize that Grinnell College encourages its students to learn. That is, it expects undergraduates to participate in active, significant scientific research. From a library perspective this means that we must have the facilities and the intensive research in the scientific literature by students as well as

The Grinnell College Libraries value all formats in which knowledge is shared, recognizing that certain types of information, data, and knowledge are presented in one format or another. It is for this reason that the new library will provide facilities to store and use all formats in which scientific information is presented. That said, in the new science library as in the present one, the Grinnell Libraries pursue a vision of vigorously incorporating the best and newest information wherever they can be applied to facilitate scientific research.

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Summary of Facilities Desired

Collections

Existing science-related holdings in the Grinnell College Libraries consist of 25,000 volumes of books (monographs) and 25,000 volumes of bound periodicals (serial subscriptions in paper format number 425). In addition, the library provides opportunities to access information in electronic formats. Such electronic access to nearly all the major indexing/abstracting sources in the sciences and 1,200 science-related journals. Present holdings of audiovisual materials are negligible, but this will change with the newly established policy of general wide responsibility for purchasing and servicing videos.

A well established rule in library planning is to allow for at least 170,000 volumes in a new facility. Consequently, the new science library should contain at least 170,000 volumes, fifty percent of which will be books (monographs, serials and government documents). In addition it should have the capacity to store 700 issues of journals and store 3000 media items, such as videos.

To maximize the efficient use of floor space we recommend the use of compact shelving (as on the third floor of Burling Library) rather than the seven-shelf libraries. We are also prepared to use compact shelving for a portion of the shelving. If compact shelving is not employed, we strongly recommend that the floors be prepared, both in weight-bearing capacity and with trenching for tracks for compact shelving at a future date.

In calculating shelving capacities these formulas are to be used: 15 periodical (serial) volumes per shelf; 18 reference volumes per shelf; 15 periodical (serial) volumes per shelf; 18 reference volumes per shelf. When calculating capacities for periodicals (serials) reduce the number of shelves by one; that is, assume seven shelves per vertical section. For height assume 8 feet. Reference shelving below.

Current issues of periodicals should be displayed on sloped shelves. Above each sloped shelf there should be a flat shelf with sufficient capacity to hold at least one unbound issue of the journal displayed on the sloped shelf above. Calculate capacities using this formula: half of the display shelves to hold five issues, half to hold four titles.

For media (video) storage we recommend the Gemtrak high-density system by Russ Bassett (see information attached). This will be housed within the facility (described below). Media will be retrieved for users by members of the

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At the present time the science library holds no microfilm and only microfiche. However, space should be reserved for the future installation of storage cabinets [58 in.(h) x 29 in.(d) x 24 in.(w)] and three microfiche cabinets [58 in.(h) x 29 in.(d) x 21 in.(w)]. The libraries prefer Russ Bassett equipment and the above dimensions are based on the Bassett equipment.

Immediately adjacent to the space reserved for microfilm/microfiche should be provided for the future installation of a microfilm/microfiche cabinet [34 in.(d) x 32 in.(w)]. Allowance should also be made for a standard person sitting at the reader-printer.

Study Facilities

Individual carrels (50): These should follow in the tradition of the current Science Library and the present Windsor Science Library. Each should

- be spacious to permit the user to spread out a number of study materials for simultaneous use;
- be capable of accommodating a desktop PC or Mac or a personal laptop and be connected to the campus network; a portion of the intelligent devices should be capable of connecting to a MathLAN;
- have an individual incandescent task light;
- preferably be equipped with a chair with casters for easy movement.

Three/four-person tables (6): These should be located away from the individual carrels. One or two may be incorporated into the reading area (see below); one or two in the Reference area (see below); and the balance in some remote and secluded part of the library. Each table should have its own task lighting and the same electronic capabilities as the individual carrels and study rooms. Chairs may be of the same type used in the individual carrels and study rooms.

Group-study rooms (6): Group projects and assignments are a growing part of higher education. The Grinnell College Libraries experience an increasing demand for group-study rooms. In the science library groups may need to work with materials which can be borrowed from the library or they may require the assistance of the science librarian with the use of specialized equipment.

Required: Three four-person rooms; three six-person rooms. Each room should be equipped for one PC, Mac, or personal laptop to be connected to the campus network (and MathLAN capability). In addition there should be a blackboard or whiteboard on one wall. One wall should be designed for visual penetration of the space, however, excellent soundproofing (to contain noise within the group-study room) is a necessity. The general atmosphere should be a congenial one; a feeling of isolation should be avoided at all costs. Doors should be capable of being locked with a key so that individuals inside the rooms should not be able to exclude others by having the door locked. Chairs may be similar to those used at the carrels and three-person tables.

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Media station(s) might be located in one of the group-study rooms.

Periodical-reading area: At least six comfortable lounge-type seats adjacent to the display shelving for current periodicals to permit browsing current scientific literature. The furniture in the present periodical Science Library is an excellent model of what is desired. One or two tables described above could be located in this area for individuals who are reading from the current periodicals.

Electronic classroom: Recommended for information literacy instruction in all respects for what is required. Capacity 36 students, with two study division-wide space. Although information literacy instruction will be available for other uses when information literacy sessions are does not need to be within the Science Library proper, but should be ad

Special Facilities and Requirements

Service center and office: The functions of circulation, reference are to be combined in one area. Components of this area are: (a) office (b) circulation/reference area; and (c) processing room

(a) Science Librarian Office

- Requires at least 225 square feet to accommodate librarians conferences
- Single entrance from the public portion of the library, circulation/reference area
- Windows on no more than two walls of the office, with blinds for occasional privacy
- Closet [5 ft.(w) x 2 ft(d)] on the wall farthest from the library; it should be equipped with a rod for hanging garments
- Three shelves for books [4 ft. x 1 ft.] on one wall of the office
- Desk. Present desk can be reused, but a useful addition is an adjustable arm that would attach to the desk for a computer monitor to allow easy movement of the monitor for working with students in the office
- Two-drawer lateral file cabinet (existing can be reused)
- Light level should not be excessive. Present office has approximately twice the lighting level required
- Electrical outlets and network connections on at least two walls

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(b) Circulation/Reference Area

- Requires a minimum of 325 square feet
- Circulation/reference counter should have two components (counter): a portion at sitting height and a second portion at standing height. A PC used to check library materials in and out will be located in a recessed well (see the circulation counter detail for a model of this detail). There should be at least two drawers on the staff side of the circulation/reference counter (more if they are accommodated)
- Supervisor's desk. Should accommodate one support staff or one student worker. The supervisor's desk in Burling Library although the one in the science library should probably not be. One PC will be located on the supervisor's desk
- Nine double-faced shelves in library stack to hold reserve read other materials kept behind the circulation counter
- Storage for electronic media (described above under Collections)
- Sufficient wall space to accommodate a bulletin board, minimum dimensions 38 in.(h) x 51 in.(w)
- Electrical outlets and network connections on each wall, counter, and at the supervisor's desk

(c) Processing Room

- Requires a minimum of 225 square feet
- Sink and running water, with adequate counter space on enclosed cabinets below
- On two walls: standard single-face library steel shelving
- On two walls: counters at seated working height with cabinets
- Electrical outlets and network connections on each wall
- PC and scanner for electronic reserves

Reference area This section of the science library shall provide:

Shelving for 10,000 volumes of reference books, preferably on half-height shelving with laminate tops on which the reference books may be quickly consulted and notes taken at a comfortable working height. Note: The number of reference volumes here specified are included in the total collection capacities enumerated above under Collections. In calculating shelf capacities in the reference section assume that the half-height sections have ten shelves and that each shelf holds 18 volumes.

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Grinnell College Libraries electronic system which is both a catalog of the libraries' collections and the gateway to a wide variety of databases and resources. Innopac will also be accessible from all PCs and Macs in the science library. The intelligent devices here enumerated are for quick reference and at least some of them should be of a stand-up nature to discourage prolonged work which will be done more appropriately at the PCs and Macs specified at the study facilities (above).

One or two of the three/four-person tables specified above in the study facilities may be located on the reference area.

~~Two~~ Media stations: Two (2) stations for viewing videos/digital video discs provided. Spacing should be generous enough to permit two people to watch video/DVD. The station should be designed with wings to insure that a visual distraction to other persons studying nearby. It is assumed that videos/DVDs will use headphones; consequently, these stations do not need rooms. Alternatively, one of these media stations could be located in a room (above) and the other on a moveable cart.

~~If~~ Elevator: If possible the entire science library should be located on one event that this is not possible, an elevator should be provided to permit books between the floors of the library without leaving the science library (see below).

~~The~~ Security: The library shall have only one public entrance, which should be immediately adjacent to the service center so that it can easily be monitored. It should be equipped with an electronic gate which prevents removal of library materials without being checked out. A single gate, such as the one currently in place in the library, should be used for both entrance and exit through the same corridor. The same corridor is responsible for being thoroughly familiar with the security system's technical requirements and to conform to those requirements.

~~The~~ The primary entrance should be equipped with a keyless access system which records the identity of any individual who enters the science library during hours open for use.

All emergency exits from the science library, other than the primary entrance, should be secured by magnetic locking devices which are automatically released when the alarm is sounded.

~~The~~ Disability access: The new science library should project a welcoming atmosphere for persons with disabilities. The spirit should go beyond mere compliance

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to express a proactive attitude of accessibility. Mills College's student disabilities in its library are an excellent baseline on which to build

Floor treatment: The science library should be carpeted throughout. acceptable. Carpet squares are not acceptable because of the tendency of booktrucks to strip them from the floor.

Electrical, Voice and Data Outlets: Whenever these occur at staff or student study stations, such outlets should be at the level of the work surface necessary to reach under a work surface and crawl on the floor to connect equipment.

Photocopiers: Space shall be provided for two photocopy machines [typical 32 in.(h) x 42 in.(d) x 55 in.(w)] and space reserved for the possible future machine.. The photocopiers should be in reasonably close proximity to the primary study spaces so that they are not a source of distraction to the primary study spaces. A locked cabinet should be provided for the storage of the photocopiers. The top of the cabinet should be of a convenient height to serve as a place to collate and trim them with a paper cutter, and perform other related activities. Space adjacent to the photocopiers in which to park a booktruck [43 in. high] on which volumes may be placed after they have been photocopied. Space provided for trash and recycling bins (as typical for building).

Microtext viewing: One microfilm/microfiche reader/printer at a minimum should be provided adjacent to the microfilm and microfiche stations. The reader/printer should be inset in a counter which provides notetaking capability and task lighting to the left. The facility in Burling Library will provide a good model. The vicinity of the microfilm reader/printer needs to be reduced to the essential for viewing the reader/printer's display screen.

Temperature and humidity: A year-round temperature of 68-72 degrees and a constant humidity of 43-47% are essential to the long-term preservation of library collections because they permit molds and mildew to form. Consistent humidity are equally as important; swings are detrimental to the preservation. The mechanical engineers are expected to provide excellent and reliable systems conforming to these specifications, throughout the science library.

Fire Control: The fire control system within the science library should be of a type that ensures fire suppression and minimizes water damage to collections. Details of such a system—one was recently installed at the Iowa State University—should be supplied as soon as obtained.

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Restrooms Two (2) small unisex restrooms are desirable with in the