

Division of Allied Health Sciences

13

Indiana University Bulletin 1969/70



INDIANA UNIVERSITY

Bulletins for the following academic divisions of the University may be obtained from the Office of Records and Admissions, Bryan Hall, Indiana University, Bloomington, Indiana 47401, unless specified otherwise.

COLLEGE OF ARTS AND SCIENCES

DIVISION OF OPTOMETRY

SCHOOL OF BUSINESS*

SCHOOL OF DENTISTRY

SCHOOL OF EDUCATION*

DIVISION OF GENERAL AND TECHNICAL STUDIES

GRADUATE SCHOOL

SCHOOL OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

NORMAL COLLEGE OF THE AMERICAN GYMNASTIC UNION

HERRON SCHOOL OF ART

INDIANAPOLIS LAW SCHOOL

JUNIOR DIVISION

SCHOOL OF LAW

GRADUATE LIBRARY SCHOOL

SCHOOL OF MEDICINE

DIVISION OF ALLIED HEALTH SCIENCES

SCHOOL OF MUSIC

SCHOOL OF NURSING

DIVISION OF REGIONAL CAMPUSES†

GRADUATE SCHOOL OF SOCIAL SERVICE

SUMMER SESSIONS

DIVISION OF UNIVERSITY EXTENSION‡

* Two *Bulletins* are issued: graduate and undergraduate.

† Write to this Division (Owen Hall) for a *Bulletin*, specifying the particular regional campus.

‡ Brochures on the Bureau of Correspondence Study, Bureau of Public Discussion, Labor Education and Research Center, and Audio-Visual Center are available from this Division (Owen Hall).

**DIVISION OF ALLIED HEALTH SCIENCES
OF THE SCHOOL OF MEDICINE**

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INDIANA UNIVERSITY BULLETIN (OFFICIAL SERIES)

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Calendars

Bloomington

1968-69

1969-70

First Semester

New student orientation and counseling

Junior Division.....	Sept. 8, Sun, 7:30 p.m.	Sept. 7, Sun, 7:30 p.m.
Transfer and graduate.....	Sept. 9, M, 9 a.m.	Sept. 8, M, 9 a.m.
Counseling.....	Sept. 10, 11; T, W.	Sept. 9, 10; T, W.
Registration.....	Sept. 11, 12, 13, 14; W, Th, F, S.	Sept. 10, 11, 12, 13; W, Th, F, S
Classes begin.....	Sept. 16, M, 7:30 a.m.	Sept. 15, M, 7:30 a.m.
Midterm reports due.....	Nov. 8, F, 5 p.m.	Nov. 7, F, 5 p.m.
Thanksgiving recess begins (after last class).....	Nov. 26, T.	Nov. 25, T
Classes resume.....	Dec. 2, M, 7:30 a.m.	Dec. 1, M, 7:30 a.m.
Christmas recess begins (after last class).....	Dec. 21, S.	Dec. 20, S
Classes resume.....	Jan. 6, M, 7:30 a.m.	Jan. 5, M, 7:30 a.m.
Classes end.....	Jan. 16, Th.	Jan. 15, Th
Exams begin.....	Jan. 17, F, 7:45 a.m.	Jan. 16, F, 7:45 a.m.
Exams end.....	Jan. 24, F, 5:15 p.m.	Jan. 23, F, 5:15 p.m.

Second Semester

New student orientation and counseling

.....	Jan. 27, M.	Jan. 26, M
Counseling.....	Jan. 28, 29; T, W.	Jan. 27, 28; T, W
Registration.....	Jan. 29, 30, 31, Feb. 1; W, Th, F, S.	Jan. 28, 29, 30, 31; W, Th, F, S
Classes begin.....	Feb. 3, M, 7:30 a.m.	Feb. 2, M, 7:30 a.m.
Midterm reports due.....	March 28, F, 5 p.m.	March 27, F, 5 p.m.
Spring recess begins (after last class).....	March 29, S.	March 28, S
Classes resume.....	April 7, M, 7:30 a.m.	April 6, M, 7:30 a.m.
Founders Day*.....	May 7, W.	May 6, W
Classes end.....	May 23, F.	May 22, F
Exams begin.....	May 24, S, 7:45 a.m.	May 23, S, 7:45 a.m.
Exams end.....	May 31, S, 5:15 p.m.	May 30, S, 5:15 p.m.
Commencement.....	June 9, M, 10 a.m.	June 8, M, 10 a.m.

Summer Sessions

Intercession

Counseling.....	June 3, T, 8 a.m.-12 noon.	June 2, T, 8 a.m.-12 noon
Registration.....	June 3, T, 1-5 p.m.	June 2, T, 1-5 p.m.
Classes begin.....	June 4, W.	June 3, W
Classes end.....	June 18, W.	June 17, W

Regular Session

Orientation.....	June 16, M.	June 15, M
Registration.....	June 17, 18; T, W.	June 16, 17; T, W
Classes begin.....	June 19, Th, 7:30 a.m.	June 18, Th, 7:30 a.m.
Independence Day Holiday.....	July 4, F.	July 4, S
Classes end.....	Aug. 8, F.	Aug. 7, F

Postsession

Counseling.....	Aug. 11, M, 8 a.m.-12 noon.	Aug. 10, M, 8 a.m.-12 noon
Registration.....	Aug. 11, M, 1-5 p.m.	Aug. 10, M, 1-5 p.m.
Classes begin.....	Aug. 12, T.	Aug. 11, T
Classes end.....	Aug. 26, T.	Aug. 25, T

* 9:30, 10:30, 11:30, and 12:30 classes do not meet.

Division of Allied Health Sciences—Medical Center Campus

First Semester

1968-69	<i>I.T.</i>	<i>M. Rec.</i>	<i>M. Tech.</i>	<i>O.T.</i>	<i>P.T.</i>	<i>P.H. Group</i>	<i>D. Hyg.</i>	<i>R. Tech.</i>
Registration.....	T, Sept. 3	T, Sept. 3	T, Sept. 3	T, Sept. 3	T, Sept. 3	T, Sept. 3	M, Sept. 9 [§]	M, Sept. 9
Classes begin.....	W, Sept. 4	W, Sept. 4	M, July 1	W, Sept. 4	W, Sept. 4	W, Sept. 4	T, Sept. 10	M, Sept. 16
Thanksgiving recess begins—5 p.m.....	W, Nov. 27	W, Nov. 27	W, Nov. 27	W, Nov. 27	W, Nov. 27	W, Nov. 27	T, Nov. 26	T, Nov. 26
Classes resume—8 a.m.....	M, Dec. 2	M, Dec. 2	M, Dec. 2	M, Dec. 2	M, Dec. 2	M, Dec. 2	M, Dec. 2	M, Dec. 2
Christmas recess begins—5 p.m.....	F, Dec. 20	F, Dec. 20	F, Dec. 20	F, Dec. 20	F, Dec. 20	F, Dec. 20	F, Dec. 20	F, Dec. 20
Classes resume—8 a.m.....	M, Jan. 13	M, Jan. 13	Th, Jan. 2	M, Jan. 13	M, Jan. 13	M, Jan. 13	M, Jan. 6	M, Jan. 6
Classes end—5 p.m.....	F, Dec. 20	F, Dec. 20		F, Dec. 20	F, Dec. 20	F, Dec. 20		F, Jan. 17
Exams begin.....								M, Jan. 20
Exams end.....								W, Jan. 29

Second Semester

Registration.....	M, Jan. 13	M, Jan. 13	M, Jan. 13	M, Jan. 13	M, Jan. 13	M, Jan. 13	M, Jan. 13	M, Feb. 3
Classes begin.....	T, Jan. 14	T, Jan. 14	Th, Jan. 2	T, Jan. 14	T, Jan. 14	T, Jan. 14	T, Jan. 28	M, Feb. 3
Spring recess begins—5 p.m.....	F, Feb. 28	F, Feb. 28	Th, Apr. 3	F, Feb. 28	F, Feb. 28	F, Feb. 28	Th, Apr. 3	F, Mar. 28
Classes resume—8 a.m.....	M, Mar. 17	M, Mar. 17	T, Apr. 8	M, Mar. 17	M, Mar. 17	M, Mar. 17	M, Apr. 14 [§]	M, Apr. 7
Founders Day*.....	W, May 7	W, May 7	W, May 7	W, May 7	W, May 7	W, May 7	W, May 7	
Classes end—5 p.m.....	F, May 16	F, May 16	F, May 30	F, May 16	F, May 16	F, May 16	Th, May 29	F, May 16
Exams begin.....							M, May 26	M, May 19
Exams end.....								W, May 28
Commencement.....	M, June 9	M, June 9	M, June 9	M, June 9	M, June 9	M, June 9	M, June 9	Sun, Aug. 24

Summer Session

Registration.....	M, June 17		M, June 2	Clinical Practice	M, June 23			
Classes begin.....	M, June 17		F, Aug. 15		F, Aug. 15			
Classes end.....	F, Aug. 29							
Exams begin.....	Arr.							

First Semester

1969-70	<i>I.T.</i>	<i>M. Rec.</i>	<i>M. Tech.</i>	<i>O.T.</i>	<i>P.T.</i>	<i>P.H. Group</i>	<i>D. Hyg.</i>	<i>R. Tech.</i>
Registration.....	T, Sept. 2	T, Sept. 2	T, Sept. 2	T, Sept. 2	T, Sept. 2	T, Sept. 2	M, Sept. 8	M, Sept. 8
Classes begin.....	W, Sept. 3	W, Sept. 3	W, Sept. 3	W, Sept. 3	W, Sept. 3	W, Sept. 3	T, Sept. 9	M, Sept. 15
Thanksgiving recess begins—5 p.m.....	W, Nov. 26	W, Nov. 26	W, Nov. 26	W, Nov. 26	W, Nov. 26	W, Nov. 26	W, Nov. 26	W, Nov. 26
Classes resume—8 a.m.....	M, Dec. 1	M, Dec. 1	M, Dec. 1	M, Dec. 1	M, Dec. 1	M, Dec. 1	M, Dec. 1	M, Dec. 1
Christmas recess begins—5 p.m.....	F, Dec. 19	F, Dec. 19	Th, Dec. 23	F, Dec. 19	F, Dec. 19	F, Dec. 19	F, Dec. 19	F, Dec. 19
Classes resume—8 a.m.....	M, Jan. 12	M, Jan. 12	M, Jan. 5	M, Jan. 12	M, Jan. 12	M, Jan. 12	M, Jan. 5	M, Jan. 5
Classes end—5 p.m.....	F, Dec. 19	F, Dec. 19		F, Dec. 19	F, Dec. 19	F, Dec. 19	W, Jan. 14	F, Jan. 19
Exams begin.....							Th, Jan. 15	M, Jan. 19
Exams end.....							W, Jan. 21	W, Jan. 28

Second Semester

Registration.....	M, Jan. 12	M, Jan. 12	M, Jan. 12	M, Jan. 12†	M, Jan. 12	M, Jan. 12 [§]	M, Feb. 2
Classes begin.....	T, Jan. 13	T, Jan. 13	M, Feb. 2	T, Jan. 13†	T, Jan. 27	T, Jan. 27	M, Feb. 2
Spring recess begins—5 p.m.....	F, Feb. 27	F, Feb. 27	Th, Mar. 26	F, Feb. 27	Th, Mar. 26	Th, Mar. 26	Th, Mar. 26
Classes resume—8 a.m.....	M, Mar. 16	M, Mar. 16	T, Mar. 31	M, Mar. 16	W, Apr. 1	M, Apr. 6 [§]	M, Apr. 6
Good Friday.....	F, Mar. 27	F, Mar. 27	F, Mar. 27	F, Mar. 27	F, Mar. 27	F, Mar. 27	F, Mar. 27
Founders Day*.....	W, May 6	W, May 6	W, May 6	W, May 6	W, May 6	W, May 6	
Classes end—5 p.m.....	F, May 15	F, May 15	F, May 29	F, May 15	F, May 22	F, May 22	F, May 15
Exams begin.....				F, May 15	M, May 25	M, May 25	M, May 18
Exams end.....				W, May 20	F, May 29	F, May 29	W, May 27
Commencement.....	M, June 8	M, June 8	M, June 8	M, June 8	M, June 8	M, June 8	Sun, Aug. 23

Summer Session

Registration.....	M, June 15		M, June 1	Clinical Practice			Clinical Practice
Classes begin.....	F, Aug. 1		F, Aug. 14				
Classes end.....							

* Qualified students are excused to attend the ceremonies. † Classes for P.T. seniors begin Jan 5. ‡ Classes for P.T. seniors end May 28. § Subject to earlier starts by some students.

Indiana University General Statement

Indiana University. Created in 1820 by an Act of the General Assembly, Indiana University has grown until it is now ranked the eleventh largest university in the nation in terms of full-time enrollment. The University is composed of 14 academic schools and 6 divisions, with a faculty exceeding 3,000. To meet the needs of approximately 52,000 full- and part-time students, the University offers 5,000 courses of instruction in more than 100 departments. Its graduate divisions offer 36 advanced degrees in 62 areas.

Students from all 50 states and from many foreign nations are enrolled on its seven campuses. Indiana University, Bloomington, is in year-round operation, with two regular semesters and a three-session summer program which is one of the largest in the nation.

Campuses. The main campus of the University at Bloomington comprises 2,000 acres of woodland traversed by the meandering stream known to generations of students as the Jordan River. Most major academic buildings are confined to the area between Third and Tenth Streets and Indiana and Jordan Avenues, while residence halls, fraternity and sorority houses, and University service divisions border this area. Buildings for the most part are constructed of native limestone, enhancing the natural beauty of the campus.

Indiana University at Indianapolis comprises the Downtown Campus; Herron School of Art; Indianapolis Law School; Normal College of the American Gymnastic Union; and the Medical Center campus, at which are located the Schools of Dentistry and Nursing and the School of Medicine, including its Division of Allied Health Sciences.

The other campuses are Indiana University at Fort Wayne; Indiana University at Kokomo; Indiana University Northwest (Gary); Indiana University at South Bend; and Indiana University Southeast (Jeffersonville).

Additional University facilities include Bradford Woods, Crooked Lake, the Geologic Field Station in Montana, the Lake Monroe biology site, the Goethe Link Observatory, and Camp Brosius at Elkhart Lake, Wisconsin.

ADMISSION

An Indiana resident who (1) graduates from a commissioned (or accredited) high school, (2) ranks in the top half of his class, (3) makes scores above average for a high school senior on the College Board Scholastic Aptitude Test (SAT) or the American College Test (ACT), and (4) completes application procedures at the appointed time may expect admission to Indiana University. Most divisions enrolling freshmen use the same procedures and standards. The Admissions Committee is authorized to make exceptions to the above standards and invites students to submit evidence of unusual skills or abilities. The Division of General and Technical Studies has different admission policies; please consult its *Bulletin*.

Preparatory courses should include four years of English (one-half unit each of speech and journalism may be included) and nine or more units in mathematics, science, foreign language, and social studies. Students seeking admission to the College of Arts and Sciences, School of Nursing, and the Division of Allied Health Sciences should include two or more years each of mathematics, science, and foreign language.

Out-of-state freshmen will be selected from applicants whose rank and test scores are in the top fourth of high school seniors.

Transfer applicants from Indiana whose grades at all colleges attended average at least C (2.0 on a 4.0 system), whose records of conduct are clear, and whose applications have been completed at the appointed time may expect admission.

Out-of-state transfer students will be admitted from applicants with an average of B or better.

Applications may be filed after completion of the junior year in high school. Early admission will be granted to superior students who have completed the required tests and are taking the necessary senior subjects. Transfer applicants may apply during the school year preceding proposed entry. Closing dates for applications are January 5 for second semester, May 15 for summer sessions, and July 15 for September. A fee of \$10 is required of each applicant who is new to the University. All questions concerning admission should be directed to the Office of Admissions, Bryan Hall, Indiana University, Bloomington, Indiana 47401.

Inter-Campus and Intra-University Transfers. Students who have been regularly admitted to Indiana University, who have enrolled at one campus or in one degree-granting division, and who have maintained a 2.0 accumulative grade-point average may transfer to another campus or another degree-granting division or program by complying with established procedures. For this purpose compliance with prescribed filing dates given above is essential.

Transfer students applying for admission to a program within the Division of Allied Health Sciences at Indiana University will NOT be admitted by the Office of Admissions. The Office of Admissions will forward to the Division of Allied Health Sciences Office the transfer credit report. The Division Office will, in turn, forward this report to the appropriate program director for his/her recommendation. This procedure requires extra time; therefore, applications should be filed early. Similarly, admissions to the Division of General and Technical Studies will be forwarded for action.

FEES

Indiana University does not charge resident students a tuition fee for the cost of instruction. Fees charged nonresidents cover in part the cost of instruction. A portion of fees is allocated for cultural and recreational uses and for health services.

Fees are paid at the time of registration each semester and are subject to change by action of the Trustees.

Fee Courtesy. Faculty and full-time staff members of the University receive a reduction in basic fees of 50 percent on any number of credit hours for which they enroll. Their spouses receive a reduction of 50 percent on a maximum of three credit hours. There is no reduction in special fees, rentals, or deposits.

Basic Costs. Expenses for attending Indiana University at Bloomington for an academic year, including in-state fees, housing (room and board), and books and supplies, total approximately \$1,431. Expenditures for clothing, travel, entertainment, and personal items are not included in this estimate.

Schedule of Fees, 1969-70

RATES PER SEMESTER (Flat Rates)	In-State	Out-of-State
Junior Division	\$195	\$525
College of Arts and Sciences	195	525
Allied Health Sciences*	195	525
Radiologic Technology (Medical Center)	140	140
RATES PER CREDIT HOUR (1-9 Hours)		
Junior Division	\$ 15	\$ 35
College of Arts and Sciences	15	35
Allied Health Sciences	15	35
Regional Campuses		
Undergraduate	15	23
Graduate	18	26

* A special supervisory fee of \$50 is charged in the Occupational and Physical Therapy programs.

	Full Withdrawal	Partial Withdrawal
Fee Refund Schedule—First and Second Semester		
First Week (until Class Change Day)	100%	100%
Second and Third Week	50% or all except \$50, whichever is larger	0%
Thereafter	0%	0%
Correspondence Study		
High School Work		\$18 per course
Residents and Nonresidents		\$15 per credit hour
Adult Education Courses	Fees as announced by each campus	

SUMMER SESSION RATES PER CREDIT HOUR	In-State	Out-of-State
Junior Division	\$ 15	\$ 35
College of Arts and Sciences	15	35
Allied Health Sciences	15	35
Regional Campuses		
Undergraduate	15	23
Graduate	18	26

	Full Withdrawal	Partial Withdrawal
Fee Refund Schedule—Summer Session		
First Week (until Class Change Day)	100%	100%
Second Week	50% or all except \$50, whichever is larger	0%
Thereafter	0%	0%

SPECIAL FEES (in addition to basic fees)

Late Enrollment or Re-Enrollment \$ 25

Other incidental special fees include laboratory, rentals, breakage, deposit, etc.

ACADEMIC REGULATIONS

Degree Requirements. The student is held responsible for understanding all requirements for graduation and for completing them by the time he expects to graduate. Information concerning a specific school or division can be obtained by consulting the *Bulletin* of that school.

Total hours required for the baccalaureate degree are 122 to 124, determined by the individual school. A minimum cumulative grade-point average of 2.0 (on a 4.0 basis) is necessary. Class standing is based on credit hours completed: freshman, fewer than 27; sophomore, 27-55; junior, 56-85; senior, 86 or more.

JUNIOR DIVISION

All students entering Indiana University directly from high school and all students transferring to the University during their freshman year enter the Junior Division. The chief purpose of the Junior Division is to guide the freshman student toward his educational goal.

The Division of Allied Health Sciences cooperates with the Junior Division in advising students during their freshman year. Therefore, when preparing its *Bulletin* for publication, the Division assumes that the student also possesses a copy of the current *Junior Division Bulletin*, which includes under the section "Junior Division" all the information relevant to the Bloomington campus. When appropriate, *Bulletins* of the other Indiana University campuses should be consulted for information on registration, orientation, and student services. The statements on academic standards and academic

regulations contained in the *Junior Division Bulletin* are applicable to all campuses of the University.

Counseling. Each freshman is assigned a faculty counselor (usually in his major department), who advises him in his program planning and assists him with any academic questions or problems.

Orientation and Registration. All new freshmen should participate in the pre-registration program held from mid-July through early August, and all freshmen will be expected to participate in the fall orientation program on campus, which acquaints them with organizations and services of the University and instructs them in study techniques.

SCHOLASTIC INFORMATION

Minimum and Maximum Semester Enrollment. Students are not permitted to enroll in fewer than 12 or more than 17 hours except with permission of the Dean. Normally a student must have earned a grade-point average of 3.0 or higher in his last completed semester to receive permission to carry more than 17 hours. Only in very exceptional cases may a student's semester enrollment exceed 19 hours.

Grades. The quality of a student's work is indicated by the following grades:

A—Unusual degree of academic performance.

B—Above average achievement.

C—Average achievement.

D—Passing work but below desired standards.

F—Failure in a course or failure to complete a course without an authorized withdrawal.

S—Satisfactory. May be used only with approval of the Dean of the School and the Dean of the Faculties. Credits earned with the grade S count toward graduation but are not computed in the grade-point average. The grade S is assigned where credit by examination is awarded by the University when the examination is of passing quality but does not clearly merit an A grade.

W—Withdrawn. Given automatically when the student, with the approval of his academic adviser and the Dean, officially withdraws during the first three weeks of a semester or first two weeks of a summer session. After these deadlines the grade W is given, in the instance of an approved and properly executed withdrawal, only if the student is passing at the time of withdrawal.

WF—Withdrawn failing. Given when the student withdraws after three weeks of a semester or two weeks of a summer session, if his work is not passing at the time of withdrawal.

I—Incomplete. May be given only when the completed portion of a student's work in the course is of passing quality. When an Incomplete is assigned, a record must be maintained in the office of the department in which the grade was given. The record will include a statement of the reason for recording the Incomplete and an adequate guide for its removal, with a suggested final grade in the event of the departure or extended absence of the instructor from the campus.

When the grade of Incomplete is given because the student missed the final examination, he will be allowed to remove the Incomplete by taking the examination only if he has the approval of the Committee on Absence and the instructor.

The student may not register in a course in which he has a grade of Incomplete.

These regulations do not apply to research and reading courses in which completion of the work of the course is not necessarily required at the end of the semester. Once a student has graduated, nothing in these regulations shall prohibit the Incomplete from remaining on the record.

Withdrawals. A grade of W is given automatically to the undergraduate student who withdraws during the first three weeks of a regular semester and during the first two weeks of a summer session on the date of his withdrawal. Thereafter, it is given only when the student withdraws with the approval of his dean, based on urgent reasons relating to health or equivalent distress, and if the student is passing on the date of withdrawal. If the student is failing on the date of withdrawal, the grade recorded on that date shall be WF (withdrawn, failing). If a student is not in attendance during the last several weeks of a semester, the instructor may report a grade of I (indicating the work is satisfactory at the end of the semester but has not been completed) if he has reason to believe the absence was beyond the student's control; if not, he shall record a grade of F. A grade of Incomplete must be removed within one calendar year of the date of its recording or the dean of the school in which the student is enrolled will authorize the grade to be changed to F. A grade of Incomplete may be removed if the student completes the work within the time limit or if the dean authorizes the change of the Incomplete to W.

Addition of Courses. No course may be added by undergraduate students after the first two weeks of a regular session or one week in a summer session unless the instructor of the course petitions that an exception be made and the request is approved by the dean of the school in which the course is offered and the dean of the school in which the student is enrolled.

Absences. Illness is usually the only acceptable excuse for absence from class and must be officially confirmed. A student's excessive absence will be reported by his instructor to the Dean of Students.

A student who misses a final examination and who has a passing grade up to that time is given temporarily a grade of incomplete if the instructor has reason to believe the absence was beyond the student's control. The Committee on Absence of the Office of the Dean of Students reviews excuses for absences from final examinations and notifies instructors of its decisions.

Academic Probation and Dismissal. A student is on academic probation whenever his accumulative grade-point average is below C (2.0). He is also on probation for the duration of the next regular semester or summer session in which he is enrolled, following the one in which he failed to attain a C (2.0) average.

Every student on academic probation must comply with such restrictions as the Office of the Dean of Students or the dean or director of the school or campus in which the student is registered may deem necessary.

Dismissal. Specific minimum standards must be met in order to be retained as a candidate for a baccalaureate degree. A Junior Division student will be dismissed if:

1. At the end of one semester his grade-point average falls below 0.8.
2. At the end of the second semester his accumulative grade-point average falls below 1.5.
3. At the end of the third semester his accumulative grade-point average falls below 1.89.

A student in the Division of Allied Health Sciences is dismissed when, in the judgment of the council of program directors, he has ceased to make progress toward a degree. When a student has failed to attain a C (2.0) average in any two semesters and has an accumulative average below C (2.0), or when he has failed to make higher than a D (1.0) average in any one semester, he will be dismissed as not making progress toward his degree.

Opportunities for Superior Students. The honors program, offered by some schools of the University, allows the student of superior ability and achievement to follow a course of independent study and research. Special sections for accelerated work are offered in some courses, and, by special examination, one may establish

advanced standing or gain exemption from certain required courses. Further information on specific honors programs may be obtained by consulting the department head or the dean of the school.

Students satisfying the requirements of a departmental honors program are granted degrees with Honors. The University also recognizes high cumulative grade averages by awarding degrees with various designations of "Distinction," "High Distinction," and "Highest Distinction."

Credit by Examination. The student may no longer receive credit for language courses by performance on placement examinations. The student who believes he is eligible for special credit because of superior preparation or independent study is especially urged to accelerate his college program by taking appropriate examinations.

Medical Center

The Indiana University Medical Center consists of 80 acres and includes the Schools of Dentistry and Nursing, the School of Medicine and its Division of Allied Health Sciences, the Robert W. Long Hospital, the James Whitcomb Riley Hospital for Children (including the Kiwanis Wing), the Rotary Building, the Clinical Building, the William H. Coleman Hospital for Women, the Union Building, the Medical Science Building, and the new Adult Hospital. Located adjacent to the Medical Center are Marion County General Hospital, Veterans Hospital, and the LaRue D. Carter Memorial Hospital. Such a situation is ideal for study in all programs of the health sciences. Students are admitted to all of the University hospitals and clinics for training and observation.

HOUSING AT INDIANAPOLIS

Official applications for housing at the University's Medical Center campus may be obtained from Philip McQuillen, Director of Housing, Indiana University Medical Center, 440 North Winona Street, Indianapolis, Indiana 46202. A small photograph and a \$25 loss and breakage deposit must accompany the application. Space assignments are made on the basis of the date the deposit is received. The Housing Office also maintains a file of approved off-campus facilities which may be checked in person in this office.

Dormitories for unmarried students are located adjacent to, and directly connected with, the Union Building. Rates are: double, \$50 per month; single, \$72 per month (single-rate facilities are limited and rarely available). Each floor includes a lounge, and at the top of the building is a roof lounge for parties and informal social meetings. Each room includes storage space, campus telephone, and air conditioning. Central bathrooms are available on each floor. The dormitory wing is accessible to the main cafeteria and lounge of the Union Building.

Winona Village (for men only) consists of temporary barracks-type units with 35 double rooms accommodating 70 men, located west of the Union Building. Rates are: double, \$35 per month; single, \$47.50 per month (if available).

Unfurnished apartments for married students include efficiency, one-bedroom, and two-bedroom accommodations. The rentals range from \$60 to \$115 per month. Furnished apartments include efficiencies at \$100 per month and one-bedroom apartments at \$125 per month.

Rates are subject to change by action of the Trustees.

STUDENT ACTIVITIES AT INDIANAPOLIS

The city of Indianapolis has much to offer the student. The nationally famous Indianapolis Symphony presents concerts throughout the winter season. Several civic theatre groups as well as touring troupes which frequently visit provide a widely varied program of plays. Both Indiana and Purdue Universities maintain campuses in Indianapolis. Butler University, Indiana Central College, and Marian College are all located in Indianapolis. Art galleries, libraries, and museums enrich the city. There are seven radio stations, three television studios, and many movie houses to entertain the Indianapolis resident.

The proximity of Bloomington also allows an evening's entertainment on that campus, where a series of inviting programs of theatre, music, and lectures which the Medical Center students may attend are scheduled. Indiana University basketball and football tickets are available at student prices, and many Medical Center students plan weekends on the Bloomington campus as part of their social calendar.

A variety of recreational activities is offered to students. Facilities are available for dances, teas, parties, movies, tennis, archery, ping pong, baseball, badminton, basketball, swimming, and bicycling.

Student Union Board. The Student Union Board is the central student organization at Indiana University at Indianapolis. Its objective is to provide cultural, social, and recreational activities for all students on that campus. The organization is composed of two representatives from each of these eleven divisions or programs: Division of Allied Health Sciences, Downtown Campus, Graduate School of Social Service, Herron School of Art, Indiana University (Methodist) Associate of Arts in Nursing Program, Indiana University Indianapolis Law School, Normal College of the American Gymnastic Union, School of Dentistry, School of Medicine, School of Nursing Degree Programs, and the Medical Sciences Graduate School.

Music. The campus chorus, Medical Center Choraliers, is open to all students on the Medical Center campus. It provides music for school and civic occasions.

Religious Activity. The Medical Center chaplain's office is open for personal appointments at any time. A chaplain is available for students of each faith to provide spiritual leadership to individuals and to their religious groups.

Campus religion groups include: the Inter-Varsity Christian Fellowship, an interdenominational group, and the Newman Club, primarily for Catholic students.

STUDENT SERVICES AT INDIANAPOLIS

Union Building. This campus is one of the few medical centers in the country that has its own Union Building. The Union Building provides a variety of activities and services to students, faculty, and staff and to visitors and guests of the University.

Eating facilities include a snack bar and cafeteria. Barber and beauty shops also are located in the Union.

The bookstore carries all necessary textbooks and supplies for the Schools of Medicine, Dentistry, and Nursing and for the Allied Health Sciences courses. Magazines, supplies, novelties, and toilet articles may also be purchased.

Library. The combined libraries of the Schools of Medicine and Nursing are located in the Medical Science Building. The library contains 78,000 volumes and subscribes to 2,180 foreign and domestic periodicals. Many of the journal files are complete, and gaps are being filled through exchange of duplicate volumes with other medical libraries, by gifts, and through direct purchase. Current issues of some 400 periodical titles received are always available in the periodical reading room. The library seats 200 persons, and ready access to reference materials is provided by 2,500 volumes of selected indices, encyclopedias, and dictionaries placed on open shelves in the main reading room. The library of the School of Dentistry is also available to Allied Health Sciences students.

Student Health Service. This service is available to students of the Schools of Medicine, Nursing, and Dentistry, the Division of Allied Health Sciences, the Normal College of the American Gymnastic Union, and the Graduate School of Social Service, as well as to the staff and faculty of the University. It offers complete clinical and laboratory examinations, immunizations, dispensary or infirmary care for minor illnesses, and limited hospital care for major illnesses or surgical operations. Optional health insurance, which provides coverage for dependents and which extends coverage to the student when away from the Medical Center campus, is also available.

FINANCIAL AID

General University scholarships and financial aids are available to students in Allied Health Sciences; in addition, there are special scholarships and loans available only to Allied Health Sciences students.

Scholarships and Educational Opportunity Grants. General University scholarships are available to students of high academic achievement. Students whose parents are able to provide limited financial assistance are eligible to be considered for the Educational Opportunity Grant Program established under the Higher Education Act of 1965.

Loans. The Student Loan Program was established under the National Defense Act of 1958, and loans are available to full-time or half-time students who need financial assistance. The loan and interest thereon of any borrower who is employed full-time in the teaching profession in a public or private institution at any level, elementary, secondary, or higher education, may be cancelled up to a maximum of 50 percent at the rate of 10 percent a year.

The Guaranteed Loan Program was established under the Higher Education Act of 1965. Loans made by commercial banks or other lending institutions are guaranteed by federal funds provided under the Act. Interest is paid by federal funds for students whose family income is under \$15,000 during the time the student is in school. Repayment begins nine months after graduation or leaving school; the principal, with interest at 7 percent on the unpaid balance, is paid over a maximum period of ten years with a minimum annual payment of \$360.

Applications. Application for financial aid should be made to the Office of Scholarships and Financial Aids, 809 East Seventh Street, Indiana University, Bloomington, Indiana 47401 or at any of the other Indiana University campuses. Incoming freshman students should apply before February 15. Upperclass students should apply by April 1 for renewal of previous awards and for consideration for new awards.

Employment. Any student wishing employment in the various departments of Indiana University at Indianapolis may apply to the Personnel Department at the Medical Center.

The federal Work-Study Program for which students in Allied Health Sciences also are eligible expands employment opportunities for students who must finance the major portion of their education. Application for the Work-Study Program is made through the general financial aid application mentioned above.

Aid to Veterans. The University is approved under the G.I. Bill and the War Orphans Education Program. Information on financial aid available to veterans under government benefits of public laws may be secured through the Veterans Administration Regional Office, 36 South Pennsylvania Avenue, Indianapolis, Indiana 46204.

Any student who has been a resident of Indiana for the last five years, and whose parent has a service-connected disability or whose parent's death was the result of service in the armed forces, is eligible for the Child-of-Disabled Veteran Award. This award pays all fees except building and health fees, which are nonremittable. Application for this award is made through the Office of Scholarships and Financial Aids.

Public Health Service Traineeships. The University is approved as a training center for advanced students in the allied health professions. Qualified students who plan to continue in a teaching capacity may apply for stipends, tuition, dependency allowances, and travel allowances. Graduate traineeships are now available on a selective basis in Medical Technology, Dietetics, Occupational Therapy, and Physical Therapy. Other programs may soon qualify for grant support.

These grants are made possible by the Allied Health Professions Personnel Training Act of 1966 (Public Law 89-751) administered by the U.S. Public Health Service, Department of Health, Education and Welfare. For further information, write to Mr. R. Martin Bruns, Assistant to the Director, Division of Allied Health Sciences, Indiana University Medical Center, 1100 West Michigan Street, Indianapolis, Indiana 46202.

Division of Allied Health Sciences

As a part of the School of Medicine, the Division is concerned with the preparation of personnel in the health-related areas on the undergraduate level. The Division was established in September, 1959, by action of the Trustees of Indiana University. In 1960, the Board of Trustees conferred upon the faculty of the School of Medicine the responsibility and authority to qualify, for the Bachelor of Science degree, those students successfully completing the prescribed curriculum in the following areas of study: Medical Records, Medical Technology, Occupational Therapy, Physical Therapy, Public Health Dental Hygiene, Public Health Education, and Public Health-Environmental Health. In 1964 the Public Health Administration program was approved and in 1965, the Cytotechnology degree program. The first two-year associate degree program in Inhalation Therapy was approved in 1965. Radiologic Technology in 1966 and Hospital Dietary Technology in 1968 were added as associate degree programs in the Division of General and Technical Studies.

Accreditation. The Division of Allied Health Sciences shares with the other schools of the University the accreditation accorded Indiana University as a member of the North Central Association of Colleges and Secondary Schools.

The Programs in Cytotechnology, Inhalation Therapy, Medical Records, Medical Technology, Occupational Therapy, Physical Therapy, and Radiologic Technology are, in addition, fully approved by the Council on Medical Education of the American Medical Association. The program in Dental Hygiene is approved by the American Dental Association.

As soon as a student wishes to select and enter an Allied Health Sciences program he should write the Director of the Division. This letter should explain how he became interested in and what his purpose is in entering the program. His/her special skills, interests, hobbies, and purposes should be included. Full explanation of any handicaps should also be included. This can be done *at matriculation from any one of the Indiana University campuses or on certification out of the Junior Division*. The minimum requirements for admission by certification include 26 credit hours with a minimum accumulative average of C. At least one personal interview is required. Ordinarily the program director and faculty advise students each semester. Special arrangements concerning personal interviews are possible for out-of-state applicants. Applications for entry into one of the programs are usually filled out at the personal interview, but may be obtained from Mrs. Miriam Rollins at the Bloomington Office, Room 202, Myers Hall, telephone 337-9404; the Indianapolis Office, Room 228, Administration Building, telephone 639-8602; or from the program directors.

Programs at Other Indiana University Campuses. Many of the degree courses required for programs in the Division of Allied Health Sciences are available at other Indiana University campuses. In some programs, all degree requirements may be completed on one of these campuses (Fort Wayne, Northwest, South Bend). Some non-degree programs may be offered only on a campus outside Indianapolis (dental assistant, Fort Wayne). Certificate and associate degree programs in the Division of General and Technical Studies are being developed as regional need is demonstrated and funds become available. The Indianapolis Office, through advisers on each campus, keeps in contact with students there, especially in connection with the courses currently being offered on the respective campuses.

In the Division of Allied Health Sciences the program directors comprise the Probation Committee (see page 9) and the Admissions Committee (see pages 6, 17) and recommend the awarding of degrees, certificates, and honors. The Director of the Division acts as Dean of the Division.

Graduate Programs. Both the Graduate School and the Graduate Division of the School of Education offer opportunities for M.S. and Ph.D. degrees for the programs

in the Division of Allied Health Sciences. Since most workers in health sciences are involved in teaching adults, the School of Education offers courses designed to prepare its students for adult education, while the Division provides the professional opportunity. The Graduate School offers options in biochemistry and microbiology for medical technologists on both the Bloomington and Indianapolis campuses. Because admission and degree requirements vary, a candidate should communicate both with the Division of Allied Health Sciences and a particular graduate school or division. Each candidate is now counseled individually by both the Division of Allied Health Sciences and the cooperating school or division he chooses.

CURRICULUM

The curriculum pattern of the Division of Allied Health Sciences calls for a year in the Junior Division, and, in some majors, one or two additional years of preparatory work. The last one or two years, depending on the program, consist of preprofessional courses and/or clinical field training supervised by directors at the Medical Center, Indiana University at Fort Wayne, and/or affiliated areas outside Indianapolis.

Those programs requiring field training are: Medical Records, Occupational Therapy, Physical Therapy, Public Health Education, Public Health-Environmental Health, and Public Health Administration.

Core Curriculum. The core curriculum, established for students in the Division of Allied Health Sciences includes: Elementary Composition and Speech courses, four credit hours; Social Sciences, 6-credit-hours sequence; Literature, Philosophy, and the Arts, 6-credit-hours sequence; Chemistry, 5 credit hours; and Zoology (not required for Dental Hygiene or Inhalation Therapy), 5 credit hours.

The specific recommendations indicated in the *Junior Division Bulletin* suffice for freshmen; the Bloomington campus map (center spread) and the list of "Courses Open to Freshmen" found therein are particularly helpful to the student at Bloomington. Similar information on course offerings is available in the appropriate *Bulletins* of the other Indiana University campuses.

The Division of Allied Health Sciences permits the widest possible latitude in elective credits. In addition to checking the list of "Core and Elective Courses" on pages 44-53 of this *Bulletin*, the student may also consult the *Bulletins* of the College of Arts and Sciences and the Schools of Business, Education, Music, etc.

It is possible for the student to accomplish a "double objective" in, for example, Allied Health Sciences and Education by judicious planning and early consultation with his adviser. The list of the faculty of the College of Arts and Sciences at Bloomington appears at the end of the *Bulletin* of the College and is duplicated only in the *University Register*, which lists all Indiana University faculty members who hold the rank of instructor or higher.

The 5- and 6-credit-hours sequence may be selected from:

SOCIAL SCIENCES: Anthropology: A103, A104; A307, A308. Economics: E201-E202; E300 (5 hours, one semester). Geography: G210; G313; G107 (5 hours). Government: G103-G104; G213. History: H103-H104; H105-H106; C383; C386-C387; C388-C389; H209-H210; H471, H472. Sociology: S161, S163, or S232.

LITERATURE, PHILOSOPHY, AND THE ARTS: The Arts: Fine Arts H100; Music M174. Classics: C250, C260. Religion: R152, R153. English: L101-L102. Fine Arts: H223-H224. Philosophy: 6 hours from the total departmental offering including at least one of P100, P240, P250, P301-P302 or P350. Music: M201, M202. Speech and Theatre: S247, S248; or, third- or fourth-year language courses of a literary character.

For complete course listings for the Social Sciences and the Literature, Philosophy, and the Arts sequences, see courses on pages 44-53.

Preprofessional Requirements. In addition to the core curriculum, certain courses are required to complete the preprofessional requirements (see specific area of study in the program section). Credit will not be given for courses which duplicate work already taken by the student.

ADMISSION AND GRADUATION

Application to the Medical Center Campus. Selection of those to be admitted to the Medical Center in Indianapolis will begin on or before February 1 of each year from the applicants who have filed or re-filed for admission prior to this date. Applications filed after May 1 will be processed as received, and selections will be made as long as vacancies exist or occur in the class to be admitted for the following academic year. Applications may be received and acted upon prior to the completion of all preprofessional requirements if the transcript of work completed at the time shows the reasonable probability that all requirements can be satisfactorily completed prior to the date of the opening classes.

All completed applications are to be submitted by the applicant to the Office of the Division of Allied Health Sciences at either Bloomington or Indianapolis. The Division Office will forward the application to the appropriate program director for his/her recommendation.

Admission. Before a student may request admission to the Medical Center campus to continue his studies within the Division of Allied Health Sciences, he must present a minimum accumulative average of C and academic credit hours, including the necessary prerequisite courses, as follows: Inhalation Therapy, 29; Cytotechnology, Medical Records, Medical Technology, Public Health Dental Hygiene, Public Health Administration, Public Health Education, and Public Health-Environmental Health, 90; Occupational Therapy and Physical Therapy, 60. The Radiologic Technology program gives preference to those with college courses.

Credit is not given toward the 120 academic hours required for graduation for physical education or military science; however, physical education courses are counted in figuring accumulative grade averages. Physical Therapy will not give credit for anatomy and physiology taken elsewhere than in the School of Medicine. A minimum accumulative average of C+ (2.5) is required for admission to the Physical Therapy program.

Physical Examination. A physical examination and record of immunizations shall be furnished by the applicant's own physician. An immunization blank will be sent automatically upon admission to the Medical Center campus. The physical examination may follow the physician's own desire but should particularly list visual, auditory, or orthopedic handicaps. A statement relative to emotional stability is important.

ACADEMIC INFORMATION

Grade Code. The letter grades used by the Medical Center campus are the same as for the Bloomington campus. All rulings concerning I, incomplete; W, withdrawn; and WF, failing or unauthorized withdrawal, can be found on pages 8 and 9 of this *Bulletin*.

Grade Reports. Grade reports are mailed to students as soon as possible after the end of a semester.

Probation. A student is placed on probation for the semester succeeding the one in which he fails to earn a C (2.0) average. He is removed from probation at the end of the semester in which his accumulative average is C.

Probation may also be assigned to students who fail to meet satisfactory standards of professional behavior. Unsatisfactory standards are represented by such behavior as: absence without leave, undue carelessness or negligence in studies or practice, inattention to the needs of patients, and falsification of records or reports. Students and parents are notified of probationary status.

Separation. A student is automatically separated from the Division when he fails to earn a C average in any two semesters or when his accumulative average is below C.

Readmission. The program directors, acting as the Admissions Committee, consider petitions for readmission from students who have been separated. A student separated for the first time may petition the Committee immediately for readmission. Readmission may be granted if warranted by exceptional circumstances. A student separated for the second time may not be admitted for the next semester and may not petition for readmission until eight weeks after the beginning of the next regular semester. Once readmitted, a student remains on probation as long as his accumulative average is below C.

Requirements for Graduation. The Bachelor of Science degree will be conferred by the Indiana University School of Medicine upon persons who have been regularly admitted by the Office of Admissions and met the following requirements: (1) the satisfactory completion of the Core Curriculum of the Division of Allied Health Sciences of the School of Medicine, (2) the completion of a minimum of 120 semester hours of academic work including the specific professional requirements for the program pursued, (3) a minimum accumulative average of C in academic work, and (4) completion of the last 30 semester hours of University work in residence at any Indiana University campus. The Associate in Science degree will be conferred on two-year graduates in Hospital Dietary Technology, Inhalation Therapy, and Radiologic Technology.

Degrees are granted in June and September. Seniors are responsible for checking with the Division Office during the first half of their last semester to confirm that all requirements have been met and that arrangements for the appropriate diplomas are correct. Commencement is held only in June. Candidates for degrees in September may participate in the June Commencement.

Programs in the Division of Allied Health Sciences

The letters preceding the number of each of the courses in the Division of Allied Health Sciences indicate the program. The letters used and their meanings are as follows:

- AH A—Cytotechnology
- AH B—Public Health Administration
- AH C—Medical Technology
- AH D—Public Health Dental Hygiene
- AH E—Public Health Education
- AH F—Inhalation Therapy
- AH H—Public Health General Course
- AH M—Medical Records
- AH P—Physical Therapy
- AH S—Public Health-Environmental Health
- AH T—Occupational Therapy
- AH W—Coordinated courses primarily for Occupational Therapy and Physical Therapy students
- T—Hospital Dietary Technology, Radiologic Technology

Required courses are listed for each program (see course listings on pages 36-44). The abbreviation "P" in the course description refers to course prerequisites.

Descriptions for courses taken at the Medical Center and for core and recommended elective courses are given on pages 36-53 of this *Bulletin*.

For additional information on these programs, write to: Program Director, (name of field or area of your interest), Division of Allied Health Sciences, Indiana University Medical Center, 1100 West Michigan Street, Indianapolis, Indiana 46202.

CYTOTECHNOLOGY

Professor Hubbard (Director); Assistant Professor Lusted; Instructor Smith

Courses are chosen so that a minimum of 90 academic credit hours (exclusive of physical education and military science) is met before students may enter the fourth year at the Indianapolis Medical Center. Near the end of the third year the student's accomplishments are reviewed and an evaluation is made of his probable success as a cytotechnologist. There is no guarantee of acceptance, and students should be prepared to elect an alternate program in the Division of Allied Health Sciences or the College of Arts and Sciences.

The fourth year is a calendar year spent in a combined tutorial-didactic experience in the cytology laboratory. Upon successful completion of the program a B.S. degree is conferred by the Indiana University School of Medicine, and the graduate is eligible to take the Cytotechnology Certifying Examination given by the Board of Registry of the American Society of Clinical Pathologists.

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Elementary Composition W131 or W140	2	Elementary Composition W132 or Speech S121	2
Zoology Z103	5	Chemistry C101 or C105†	5
Foreign Language*	5	Foreign Language*	5
Social Sciences Sequence	3	Social Sciences Sequence	3
Physical Education W100	1	Physical Education W100	1
Orientation to Allied Health Sciences			
AH G100†	1		16
	17		

* Recommended elective.

† Not required at campuses other than Bloomington.

‡ Chemistry C101-C102 are terminal courses. Chemistry C105-C106 qualify for chemistry majors.

Second Year

Anatomy A210	5	Physiology P204	5
Chemistry C102 or C106*	5	Literature, Philosophy, and the Arts	
Literature, Philosophy, and the Arts		Sequence	3
Sequence	3	Electives†	7
Electives†	2		15
	15		

Third Year

Botany B101	5	Zoology Z215	5
Microbiology M250, M255	5	Zoology Z364	4
Electives	5	Electives	6
	15		15

Fourth Year

(Medical Center)

General Medical Cytology AH A402	3	Cytology of Sputum and Bronchial	
Gynecologic Cytology, Nonmalignant		Secretions AH A432	3
Conditions AH A412	3	Cytology of Body Fluids AH A442	2
Gynecologic Cytology, Malignant		Cytology of Gastric Secretions, Urine, Spinal	
Conditions AH A422	3	Fluid and Other Secretions AH A452	2
Technics in Medical Cytology AH A462	2	Pathology C477	2
Medical Terminology AH M330	3	Seminar in Cytology AH A470	1
	14	Certification Internship AH A465	6
			16

The final six months of academic training in the Cytotechnology fourth-year program begins in the second semester at the Indiana University Medical Center within the Department of Surgical Pathology. The training includes lectures, demonstrations, laboratory periods, and conferences. A total of 18 credit hours is earned in this period. Students may enter this program by selection only.

INHALATION THERAPY

Assistant Professor LoSasso (Director); Professor Ross; Lecturers Goodrich, Keel, Miller, Vincent (Acting Co-Director), Wolfe; guest lecturers†

Inhalation therapy employs a variety of techniques and procedures in assisting patients to return to their normal heart-lung physiology.

The graduate of this program is qualified to administer all phases of inhalation therapy, including oxygen and aerosol therapy, positive pressure treatments and continuous ventilation therapy, cardio-pulmonary resuscitation, and pulmonary rehabilitation. Students are also instructed in blood-gas monitoring techniques and pulmonary function studies.

Technical knowledge of equipment and procedures, along with a basic understanding of the sciences and disease processes, affords the inhalation therapy technician the opportunity to function as an integral part of the health-care team and to meet the needs of individual patients. Additional instruction is provided in the area of departmental organization, administration, and ethics.

The program is approved by the Board of Schools of Inhalation Therapy Technicians, Council on Medical Education of the American Medical Association.

Graduates of this program are eligible to take the examination given by the American Registry of Inhalation Therapists and upon passing become Registered Inhalation Therapists (A.R.I.T.).

* Chemistry C101-C102 are terminal courses. Chemistry C105-C106 qualify for chemistry majors.

† Recommended electives: Z366, Genetics Laboratory; C341, C343, Organic Chemistry I and Laboratory; Mathematics M115 or M117.

‡ Guest lecturers—Brashears, Daly, Koehnke, Manion, Martinez, Matthews, Roesch, Thompson, Walcher, Waltz, Wideman.

First Year

First Semester		Second Semester	
Elementary Composition W131 or W140	2	English Composition W132 or Speech S121	2
Physics P100	5	Chemistry C101	5
Anatomy A210	5	Physiology P204	5
Literature, Philosophy, and the Arts		Literature, Philosophy, and the Arts	
Sequence	3	Sequence	3
Physical Education W100	1	Physical Education W100	1
Orientation to Allied Health Sciences			
AH G100*	1		
	17		16

Summer Session
(Medical Center—10 weeks)

Inhalation Therapy I AH F201 8

NOTE: Uniforms are required for the summer session and must be furnished by the student.

Second Year
(Medical Center)

Microbiology B218 (or M250, M255)	5	Psychology P101	3
Clinical Lecture I W374	3	Inhalation Therapy II AH F202	4
Social Sciences Sequence	3	Pharmacology Z123	2
Inhalation Therapy I AH F201	4	Pathology C477	2
	—	Social Sciences Sequence	3
	15	Clinical Lectures III W472	2
			16

Inhalation Therapy courses in the 200 series in Indianapolis are open only to students enrolled in the Inhalation Therapy program.

MEDICAL RECORDS

Assistant Professors Lacy (Director), Ridley; Instructors Ashton, Miller, Hefner; Lecturers Nolan, Schultheis, Sutherland

The medical record administrator, as director of a medical records department, is responsible for developing and maintaining a system of medical records which will promote the best medical care of the patient, provide training material for interns and residents, and serve as a source of information for medical research and clinical evaluation. As director he/she is also called upon to assist the hospital staff with many medical administrative and medicolegal problems.

Acceptance of an applicant over 35 years of age is subject to review by the Director of the Medical Records program.

The student learns to analyze medical records, compile monthly and yearly statistical data, process correspondence and insurance hospital forms, and keep an up-to-date index of diseases and operations for use by physicians and research specialists.

After graduation the student is eligible to take the registration examination of the American Association of Medical Record Librarians which certifies him or her as a Registered Record Librarian (R.R.L.).

The curriculum in the Medical Records program is approved by the Council on Medical Education and the American Medical Association in collaboration with the Committee on Education and Registration of the American Association of Medical Record Librarians.

* Not required at campuses other than Bloomington.

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Elementary Composition W131 or W140	2	Elementary Composition W132 or	
Chemistry C100	5	Speech S223	2-3
Literature, Philosophy, and the Arts		Zoology Z103	5
Sequence	3	Social Sciences Sequence	3
Social Sciences Sequence	3	Literature, Philosophy, and the Arts	
Physical Education W100	1	Sequence	3
Speech S121 or S130	2	Physical Education W100	1
Orientation to Allied Health Sciences		Classics C209*	2
AH G100*	1		
	17		16-17

Students with less than three years of high school mathematics should check with their counselor to determine if they may need to substitute a mathematics course.

Proficiency in typing will be expected by the beginning of the senior year.

Second Year

Psychology P101	3	Psychology P102	3
Office Management C300	2	Office Management C403	3
Electives†	10-11	Logic P250 or Ethics P240	3
	15-16	Electives†	7-8
			16-17

Third Year

Office Systems and Control C404	3	Physiology P204	5
Anatomy A210	5	Organizational Behavior and	
Principles of Management and		Leadership J301	3
Administration W300	3	Electives†	6-7
The Computer in Business K201	2		14-15
Electives†	3		
	16		

Fourth Year
(Medical Center)

Statistics AH H304	2	Medicine and the Law AH M445	2
Medical Record Science I AH M411	5	Clinical Lectures III AH W472	2
Directed Practice Experience I AH M441	4	Pathology C477	2
Medical Terminology AH M330	3	Medical Record Science II AH M412	5
Clinical Lectures I AH W374	3	Directed Practice Experience II AH M442	6
Hospital Organization and Management			
AH M322	2		17
	19		

MEDICAL TECHNOLOGY

Graduates of this program will find opportunities available in hospitals, clinics, research, or in the physician's office. Opportunity for specialization, advancement, and study for advanced degrees is available. Prospective candidates should be science oriented, conscientious, thoroughly reliable, and honest. The ability to supervise and teach is desirable. Patient contact is subservient to laboratory skill.

The curriculum is designed to provide a broadly based knowledge in the biological sciences as well as opportunity to elect courses from the humanities. The fourth calendar year is spent in a combined tutorial-didactic experience in a clinical laboratory. After graduation, students are eligible to apply for examination for certification by the Board of Registry of the American Society of Clinical Pathologists.

* Not required at campuses other than Bloomington.

† Recommended electives include: Business B413, F260; Education R523, R543; Philosophy P100; Psychology P234, P324; Religion R152, R153; Speech S221, S223, S229, S323; courses in language of choice.

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Elementary Composition W131 or W140	2	Elementary Composition W132 or	
Physical Education W100	1	Speech S121	2
Zoology Z103	5	Physical Education W100	1
Social Sciences Sequence	3	Chemistry C105†	5
French F101 or German G101*	5	Social Sciences Sequence	3
Orientation to Allied Health Sciences		French F102 or German G102*	5
AH G100†	1		
	<hr/>		<hr/>
	17		16

Second Year

Chemistry C106	5	Chemistry C341	3
Literature, Philosophy, and the Arts		Chemistry C343	2
Sequence	3	Literature, Philosophy, and the Arts	
Microbiology M250	3	Sequence	3
Microbiology M255	2	Physiology P204	5
Classics C209†	2	Electives	2
	<hr/>		<hr/>
	15		15

Third Year

Microbiology M350	3	Chemistry C313	3
Microbiology M355	2	Electives	12
Zoology Z364*	4		
Electives	6		
	<hr/>		<hr/>
	15		15

Fourth Year
(Medical Center)

Professors Hubbard, Summers; Associate Professors Lusted (Director), Minton; Assistant Professors Parekh, Sanghvi; Instructors Dritsas, Feeley, Hocker, Jung, Lee, Lehman; Lecturers Batchelor, Young

The courses given in the fourth year consist of a rotating internship in the clinical laboratories of the hospitals. The student gains practical experience which is supplemented by lectures, demonstrations, and library assignments. The clinical year comprises a full 52 weeks of which two are reserved for vacation. The total time in classroom and laboratory work is 2,000 clock hours for which at least 34 academic hours are earned. Upon satisfactory completion of this year, students are eligible to take the Registry examination of the American Society of Clinical Pathologists.

<i>First Semester</i>		<i>Second Semester</i>	
AH C406 Clinical Chemistry	6	AH C409 Serology	2
AH C407 Hematology	6	AH C411 Bacteriology	6
AH C408 Serology	4	AH C412 Topics in Medical Technology	2
AH C410 Urinalysis	2	J420 Parasitology	2
AH C413 Clinical Correlation		C477 Pathology	2
and Theory	2	AH C479 Physiological Chemistry	2
	<hr/>		<hr/>
	20		16

The above is a typical program. Because individual students rotate among the above courses, the sequence may vary.

* Recommended elective. Others include: Chemistry S342; Microbiology M430; Physics P100, P201-P202; Zoology Z215, Z364, Z466.

† Not required at campuses other than Bloomington.

‡ P: two years of high school algebra; or one and one-half years of high school algebra and M117; or one year of high school algebra and M115; C101 not accepted.

Fourth Year
(St. Francis Hospital—Beech Grove)

Professor Summers; Associate Professor Minton; Assistant Professors Costin (Director), Buehl; Instructor MacAllister (Teaching Supervisor); Lecturers Carrier, Charnley, Clark, Hibben, Robertson, Utke, VanVliet

Most of the courses in the 400 series are scheduled on a rotating basis. The year is chiefly a laboratory internship including 210 hours of scheduled didactic lectures, correlated demonstrations, library assignments, visual aids, field trips, workshops, and special project work. A minimum of 2,000 clock hours must be met for eligibility for certification by the Registry of Medical Technologists, American Society of Clinical Pathologists. The courses, for which 34 accredited semester hours are earned, are arranged so as to meet the Registry requirements. After satisfactory completion of this year, students are eligible to take the Registry examination of the American Society of Clinical Pathologists.

<i>First Semester</i>	<i>Second Semester</i>
AH C400 Introductory Laboratory Practice cr. arr.	AH C409 Serology 2
AH C406 Clinical Chemistry 6	AH C411 Microbiology 6
AH C407 Hematology 6	AH C412 Topics in Medical Technology 2
AH C408 Blood Bank 4	AH C414 Honors Course in Medical Technology cr. arr.
AH C410 Clinical Microscopy 2	AH C460 Surgical Pathology cr. arr.
AH C413 Clinical Correlation and Theory 2	J420 Parasitology 2
<hr/> 16	<hr/> 18

The above is a typical program. Because individual students rotate among the above courses, the sequence may vary.

Fourth Year
(Fort Wayne)

Lutheran Hospital: Assistant Professors Aldred, Aust, Griest (Director); Lecturer Machlan

Parkview Memorial Hospital: Assistant Professors Frankhouser, Schlademan (Director); Lecturers Schwartz, Whitcomb

All courses in the 400 series are on a rotating basis, chiefly laboratory internship in character, and earn credits on the basis of one credit hour per 60 clock hours. A minimum of 2,000 clock hours must be met for certification by the Registry of Medical Technologists. The sequence of courses is so arranged that it meets Registry requirements.

<i>First Semester</i>	<i>Second Semester</i>
AH C431 Hematology I 2	AH C410 Urinalysis 2
AH C432 Hematology II 2	AH C420 Parasitology 2
AH C434 Hematology III 2	AH C450 Serology I 2
AH C440 Bacteriology I 2	AH C460 Surgical Pathology 2
AH C441 Bacteriology II 2	AH C473 Clinical Chemistry III 2
AH C442 Bacteriology III 2	AH C476 Clinical Chemistry IV 2
AH C471 Clinical Chemistry I 2	AH C491 Blood Bank I 2
AH C472 Clinical Chemistry II 2	AH C492 Blood Bank II 2
AH C489 Basal Metabolic Techniques ½	<hr/> 16
AH C490 Electrocardiographic Technique ½	
<hr/> 17	

St. Joseph's Hospital: Assistant Professors Pan, Schneider (Director); Lecturers Amstutz, Brooks, Fox; Teaching Supervisor Rumschlag.

All courses in the 400 series are on a rotating basis, chiefly laboratory internship in character, and earn credits on the basis of one credit hour per 60 clock hours. A minimum of 2,000 clock hours must be met for certification by the Registry of Medical

Technologists. The sequence of courses is so arranged that it meets Registry requirements.

<i>First Semester</i>		<i>Second Semester</i>	
AH C401 General Externship	2	AH C420 Parasitology	2
AH C410 Urinalysis	2	AH C460 Surgical Pathology	2
AH C431 Hematology I	2	AH C471 Clinical Chemistry I	2
AH C432 Hematology II	2	AH C472 Clinical Chemistry II	2
AH C434 Hematology III	2	AH C473 Clinical Chemistry III	2
AH C440 Bacteriology I	2	AH C474 Radioisotopes	1
AH C441 Bacteriology II	2	AH C476 Chemistry IV	2
AH C442 Bacteriology III	2	AH C477 Chemistry V	2
AH C450 Serology	2	AH C491 Blood Bank I	2
	18	AH C492 Blood Bank II	2
			19

Fourth Year
(St. Mary Mercy Hospital—Gary)

Pathologists Mason (Director), Cabrera; Instructors Holowaty, Swierczewski; Lecturers Davis, Demitroulas, Dielman, Duff, Grimes, Liber, Wait.

All courses in the 400 series are on a rotating basis, chiefly laboratory internship in character, and earn credits on the basis of one credit hour per 60 clock hours. A minimum of 2,000 clock hours must be met for certification by the Registry of Medical Technologists. The sequence of courses is so arranged that it meets Registry requirements.

<i>First Semester</i>		<i>Second Semester</i>	
AH C405 Medical Laboratory Records	½	AH C407 Hematology	6
AH C406 Clinical Chemistry	6	AH C409 Serology	4
AH C408 Blood Bank	4	AH C410 Urinalysis	2
AH C411 Bacteriology	6	AH C460-C461 Surgical Pathology	4
AH C420 Parasitology	2	AH C474 Radioisotopes	1
	18½	AH C489 Basal Metabolic Techniques	½
			17½

Fourth Year
(South Bend)

South Bend Medical Foundation, Inc.: Assistant Professors Culbertson (Director), Bennett (Director of Medical Technology), Buslee, Galup, Godersky, Pascuzzi, Sisson; Instructors Bahler, Gates, Hagan, Hathway, Low, Osgood, Pless, Reed, Straup, Wilson, Winstead; Lecturers Berndt, Byers, Goodhew, Heet, Kolasinski, Lust, Markey, Moswinski, Wendland.

All courses in the 400 series are on a rotating basis, chiefly laboratory internship in character, and earn credits on the basis of one credit hour per 60 clock hours. A minimum of 2,000 clock hours must be met for certification by the Registry of Medical Technologists. The sequence of courses is so arranged that it meets Registry requirements.

<i>First Semester</i>		<i>Second Semester</i>	
AH C406 Clinical Chemistry	cr. arr.	AH C412 Topics in Medical Technology	cr. arr.
AH C407 Hematology	cr. arr.	AH C413 Clinical Correlation and Theory	cr. arr.
AH C408 Blood Bank	cr. arr.	AH C414 Honors Course in Medical Technology	cr. arr.
AH C409 Serology	cr. arr.	AH C420 Parasitology	2 cr.
AH C410 Urinalysis	cr. arr.	AH C460-C461 Surgical Pathology	cr. arr.
AH C411 Bacteriology	cr. arr.	AH C474-C475 Radioisotopes	cr. arr.
AH C415 Quality Control	cr. arr.	AH C478 Instrumentation	cr. arr.
		AH C489 Basal Metabolic Techniques	cr. arr.

B.S. Degree in Medical Technology at Indiana University Southeast

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Elementary Composition W131	2	Elementary Composition W132	2
Chemistry C105	5	Chemistry C106	5
Social Sciences Sequence	3	Social Sciences Sequence	3
Zoology Z103	5	Zoology Z215	5
	15		15

Second Year

Literature, Philosophy, and the Arts Sequence	3	Literature, Philosophy, and the Arts Sequence	5
Chemistry C341	3	Chemistry C342	3
Chemistry C343	2	Chemistry C344	2
Physiology P120	7	Electives*	5
	15		15

Summer Session

Microbiology M250-M255	5
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Third Year

Zoology Z364	4	Electives*	10
AH M330 Medical Terminology	2		
Electives*	9		
	15		

Fourth Year

Hospital affiliations are not yet complete but will be available when students reach the senior year. The basic program will be similar to those currently operating at other Indiana University campuses, with sequence changes as noted above.

Master's Degree Program for Medical Technologists

To be admitted, the student must meet the general requirements as outlined in the *Bulletin of the School of Education, Graduate Division* and be certified as M.T. (ASCP). The degree offered is the Master of Science in Education with a major in Audio-Visual Communications and Medical Technology.

Other options in the Graduate School are in biochemistry, microbiology, and genetics.

Requirements

	Hours
Education R523 Utilization of Audio-Visual Materials	3
Education R543 Preparation of Inexpensive Instructional Materials	2
Education R546 Survey of Audio-Visual Communications	3
Education S518 Advanced Study in the Teaching of High School Science	3
Education R590 Practicum in Medical Technology Teaching Skills	1-4
History and Philosophy of Science X303 Introduction to Philosophy of Science	3

Two of the following or comparable courses are advisable.

Education P507, P503 Introduction to Research	6
or Education P525 Advanced Educational Psychology	6

From the recommended courses below 12 to 15 semester hours are required. Other professional group electives may be chosen with consent of adviser.

Medicine B800 General Biochemistry for Medical Students	4
Medicine G721 Cell Biology	3
Microbiology J604 Microbiology for Medical Students	3-7
Toxicology F812 Methods in Toxicology	cr. arr.

The residence requirement is two semesters on the Medical Center campus. The minimum number of semester hours for the nonthesis program is 36.

* Preprofessional electives: Biology B305, Botany B320, Anatomy A464, Zoology Z466.

OCCUPATIONAL THERAPY

Assistant Professors Nathan (Director), Simek; Instructors Bradley, Gallagher, Griffin, Huss, Nic, Polliard, Seymour; Lecturers Bates, Fess, Griswold, Grummon, Hamant, Linzie, Lurie, Murphy, Nail, Riekens, Snider, Swan, Verderber, Wissing, Yoder.

Occupational therapy is treatment through activity. It is a means of returning a patient to health through stimulating his own efforts, interests, and will. Just as work and play contribute to the well-being of a healthy person, they become even more vital when illness or injury exists. Often through the stimulus of mental and physical activity a patient's abilities can be regained or improved.

The occupational therapist is an important member of the health team which is composed of the physician, the nurse, the social worker, the psychologist, the physical therapist, and others. The restorative program, planned and carried out by this team working in close collaboration, is the process of rehabilitation. Occupational therapy, as it is employed in the prevention and treatment of disease and disability, makes use of creative and manual arts, recreation and educational activities, and prevocational and self-help pursuits.

The occupational therapist may work with patients of all ages who have a wide variety of physical and emotional problems. Pediatrics, geriatrics, physical injuries, heart disease, cerebral palsy, poliomyelitis, and mental illness are medical areas long associated with treatment by occupational therapy.

Graduates of the degree program are eligible for the examination leading to admission to the Registry of Occupational Therapists maintained by the American Occupational Therapy Association. This examination is held throughout the country in January and June of each year. Admission to the Registry is the certification of a therapist to practice.

First Year

First Semester		Second Semester	
Elementary Composition W131 or W140	2	Elementary Composition W132 or	
Psychology P101	3	Speech S121	2
Sociology S161	3	Psychology P102	3
Electives*	4	Sociology S163 or S232	3-3
Physical Education W100	1	Occupational Therapy Theory I AH T203†	2
Literature, Philosophy, and the Arts		Physical Education W100	1
Sequence	3	Electives*	2
Orientation to Allied Health Sciences		Literature, Philosophy, and the Arts	
AH G100†	1	Sequence	3
	17		16

Second Year

Psychology P324	3	Chemistry C100 or C101	5
Zoology Z103	5	Speech S229§	3
Classics C209†	2	Electives*†	7
Electives*‡	5		15
	15		

Third Year
(Medical Center)

Anatomy D323	5	Physiology F305	5
Psychopathology N303	2	Kinesiology AH W376	3
Human Behavior AH T323	2	Psychosocial Dysfunction AH T360	5
Therapeutic Techniques AH T351	5	Pathology C477	2
Personality Development of the		Therapeutic Techniques AH T352	2
Child AH T381	2		17
Clerkship AH T324	1		
	17		

* Recommended elective: Home Economics H215.

† Not required at campuses other than Bloomington.

‡ A working knowledge of typing is required. Students who have not had high school typing should take Business C220 or C221.

§ P: Speech S121 or S130.

Summer Session

Clinical Education AH T495	5
(three-month internship in psychiatry)	

Fourth Year
(Medical Center)

Physical Dysfunction AH T460	4	Physical Dysfunction Practicum AH T490	4
Prevocational Evaluation AH T452	2	(February)	
Activities of Daily Living AH T454	2	Clinical Education AH T496	5
Clinical Lectures I AH W374	3	(March, April, May—three-month	
Clinical Lectures II AH W471	3	internship in physical disabilities)	
Occupational Therapy Organization and			
Administration AH T301	2		9
Neuroanatomy AH W324	2		
	18		

Occupational therapy courses in the 300 and 400 series are open only to students enrolled in the Occupational Therapy program.

PHYSICAL THERAPY

Associate Professors Ekstam (Director), Conine; Assistant Professors Ramsden, Young; Instructors Ladue, Yenowine; Lecturers Arnold, Babiak, Bailey, Boger, Fredrickson, Gehris, Goldblatt, Hagar, Kennedy, Kinsman, Koehneke, Lewis, Miles, Pitt, Strunk, Whitfield.

Physical therapy is one of the allied health professions providing comprehensive health care. It is directed toward prevention of disease and disability and toward restoration of function to disabled individuals. These objectives are accomplished through the use of evaluative procedures, therapeutic exercise, physical agents, and assistive devices.

A physical therapist administers treatment upon referral by a physician, participates in education, teaching, and research activities, and provides consultative service. Physical therapy service is utilized in hospitals, outpatient treatment facilities, industrial clinics, governmental and voluntary health agencies, public school systems, and nursing homes.

The legal practice of physical therapy in Indiana is regulated by the Indiana State Board of Medical Registration and Examination. Success in the state examination entitles the candidate to a physical therapist license, enabling him to practice in Indiana or in those states endorsing the Indiana license.

The curriculum in the Physical Therapy program is approved by the American Physical Therapy Association and accredited by the American Medical Association.

First Year

First Semester		Second Semester	
Elementary Composition W131 or W140	2	Elementary Composition W132	2
Chemistry C101	5	Chemistry C102	5
Psychology P101	3	Psychology P102	3
Physical Education W100	1	Physical Education W100	1
Literature, Philosophy, and the Arts		Literature, Philosophy, and the Arts	
Sequence	3	Sequence	3
Electives	2	Electives	2
Orientation to Allied Health Sciences			
AH G100*	1		16
	17		

Second Year

Zoology Z103	5	Physics P100	5
Sociology S161	3	Zoology Z215	5
Classics C209*	2	Sociology S163 or S232	3
Electives	5	Introduction to Physical Therapy	
	15	AH P204*	2
		Electives	2
			17

* Not required at campuses other than Bloomington.

Third Year (Medical Center)

Anatomy D323	5	Physiology F305	5
Kinesiology AH W376	3	Applied Neuroanatomy AH W324	3
Child Development AH W373	3	Therapeutic Exercise II AH P481	3
Therapeutic Exercise I AH P384	2	Physical Tests and Measurements AH P382	3
Physical Agents I AH P461	2	Pathology C477	2
History, Administration, and Professional Relationships AH P478	2	Clinical Lectures III AH W472	2
	17		18

Summer Session (8 weeks)

Clinical Education I AH P491	2
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Fourth Year (Medical Center)

Applied Neurophysiology AH P483	3	Clinical Education II AH P492	8
Clinical Lectures I AH W374	3		
Clinical Lectures II AH W471	3		
Physical Agents II AH P462	3		
Psychological Aspects of Physical Disability AH W312	2		
Psychopathology N303	2		
Applied Physical Therapy AH P485	2		
	18		

Physical Therapy courses in the 300 and 400 series in Indianapolis are open only to students enrolled in the Physical Therapy program; a minimum accumulative grade average of C is required for enrollment.

Graduate Program in Physical Therapy Education

This program is concerned primarily with the preparation of graduate physical therapists for teaching responsibilities in an academic or clinical setting. The Interdisciplinary curriculum is co-sponsored by the School of Education and the School of Medicine and leads to a Master of Science in Education degree. To be admitted to this program, the applicant must have satisfactorily completed an undergraduate or certificate program of study in physical therapy accredited by the American Medical Association in collaboration with the American Physical Therapy Association. He must also satisfy the criteria for selective admission to the Graduate Division of the School of Education and to the program in Physical Therapy Education. To obtain a master's degree in this field, the candidate must demonstrate competence in professional skills as well as academic ability.

Basic Requirements	15
P503 Introduction to Research	3
* One course selected from the following:	
Education P525 Advanced Educational Psychology	3
Education P540 Learning and Cognition in Education	3
Education P565 Personality and Adjustment	3
* One course selected from the following:	
Education H503 History of Education in Western Civilization	3
Education H504 Historical Foundations of American Education	3
Education H520 Education and Social Issues	3
Education H530 Philosophy of Education	3
Education H538 Reflective Thinking	3
Education H540 Educational Sociology	3
Major Requirements	12
AH T501 Scientific Inquiry in Health Professions	3
AH T525 Physical Therapy Curriculum Development	3
AH T780 Correlation Seminar in Physical Therapy	3
AH T695 Practicum in Physical Therapy Education	3

* A minimum of 6 credit hours in appropriate courses offered by the Graduate Division of the School of Education. See the *Bulletin of the School of Education, Graduate Division*.

Electives

Sufficient additional graduate courses to develop a subject matter concentration area related to physical therapy, with the approval of adviser.

All work to be applied toward the degree must be completed within a period of six calendar years from the date of admission to the program.

PUBLIC HEALTH DENTAL HYGIENE

(Department of Preventive Medicine)

Chancellor Hine; Acting Dean McDonald; Professors Hopper, Johnston, Phillips, Raidt, Shafer, Shanks, Starkey, Van Huysen; Associate Professors Adams, Ping, Standish, Swartz; Assistant Professors Ackerman, Carr, Fisk (Director, Dental Hygiene Program), Matlock, Norman, Whitten; Instructors Brittain, Hamilton, Kline, Smith, Totten; Lecturers Bland, Gish, Jones, McLelland.

The dental hygienist is the member of the health team concerned with the prevention of diseases of the mouth. The dental hygienist studies a professional college program which entitles a graduate, after successfully passing a state board examination, to perform specific treatments for children and adults, to take and process dental X-rays, to assume duties in the dental office, and/or to participate as a health worker in federal, state, or local public health and educational programs.

Indiana University offers a program which leads to a Certificate in Dental Hygiene and a program which leads to the degree Bachelor of Science in Public Health Dental Hygiene. While the certificate program is adequate to prepare the dental hygienist to perform the tasks which may be assigned in a private dental office, additional knowledge and skills are necessary for positions involving the responsibilities of education and administration. Because of increasing interest among dental hygienists for these opportunities, a degree program is offered by the Division of Allied Health Sciences of the School of Medicine.

The first or freshman year may be taken at any college or university, but courses must be comparable to those offered by Indiana University in order to transfer for credit. The second and third or the sophomore and junior years must be taken in the School of Dentistry, Indiana University at Indianapolis, or at Indiana University at Fort Wayne. The fourth or senior year must be taken in the Division of Allied Health Sciences of the School of Medicine in Indianapolis.

Indiana University at Fort Wayne offers, in addition, a one-year course for dental assistants and an alternate degree course with a fourth year in the School of Education. See the Fort Wayne *Bulletin* for details.

First Year*First Semester*

Elementary Composition W131 or W140	2
Government C103*	3
Literature, Philosophy, and the Arts	
Sequence	3
Speech and Theatre S121	2
Physical Education W100	1
Chemistry C100 or C101	5
Orientation to Allied Health Sciences	
AH G100†	1
	<hr/>

17

Second Semester

Elementary Composition W132	2
Government C104*	3
Literature, Philosophy, and the Arts	
Sequence	3
Sociology S161	3
Physical Education W100	1
Electives	4
	<hr/>

16

* Should be selected for social science requirement to provide background for later public health courses. Substitution can be made only with the specific approval of the counselor.

† Not required at campuses other than Bloomington.

Second Year
(Medical Center or Fort Wayne)

Human Biology I D HYG H212	4	Human Biology II D HYG H213	4
Dental Anatomy D HYG H214	3	Pharmacology and Therapeutics D HYG	
Chemistry and Nutrition D HYG H216	3	H215	2
Dental Prophylaxis Techniques D HYG H218	3	Psychology P101	3
Sociology S309	3	Microbiology for Dental Hygienists J207	3
	16	Clinical Practice D HYG H219	4
			16

Third Year
(Medical Center or Fort Wayne)

Radiology D HYG H303	2	Radiology Laboratory D HYG H303	1
Dental Materials D HYG H308	2	Technical Writing D HYG H310	2
Oral Pathology D HYG H304	2	Public Health Education Methods AH E443	3
Public Health Organization and Administra-		Practice of Community Dental Hygiene	
tion AH H301	3	D HYG H309	2
Psychology P102	3	First Aid HPER H160	1
Clinical Practice I D HYG H301	5	Clinical Practice II D HYG H302	5
	17	Principles of Environmental Health AH S321	3
		Preventive Dentistry D HYG H217	1
			18

Fourth Year
(Medical Center)

Statistics AH H304	2	Public Health Practice D HYG G999†	3
School Health Education AH E440	3	Public Health Field Practice AH D465	5
Community Health Education AH E442	3	Speech Pathology AH D403	2
Clinical Supervision AH D401*	2	Community Dental Hygiene AH D405	3
Psychology P324	3	Electives	3
Speech S223	3		
Electives	2 or 3		16
	18 or 19		

PUBLIC HEALTH EDUCATION
(Department of Preventive Medicine)

Professor Hopper (Director); Associate Professor Adams; Instructors Brittain, Yoho; Lecturers Bland, Jones, McLelland.

The health educator's major aim is to help people understand their health needs and how to meet these needs as individuals and as members of a group, family, community, or nation. The health educator helps people to think critically and to make intelligent choices in their health behavior. He must be well grounded in the biological and social sciences, since he will be explaining and interpreting the latest developments in the health sciences and will be motivating people to use them.

In recent years, there has been an expansion of health education activities in schools, in public health departments, in voluntary health agencies, and in industrial and commercial companies. The emphasis upon health education is expected to continue and the number of personnel needed will greatly increase.

For the health education teacher in a secondary school, it is advisable to become certified in health education and in a second subject such as physical education, science, or social science.

There are opportunities to become a health education consultant or specialist in a state or city department of health, in the U.S. Department of Health, Education and Welfare, or in some professional organization such as the American Medical Association or American Dental Association.

* Admission by permission of the Director of Dental Hygiene, School of Dentistry.

† Offered in the School of Dentistry.

Voluntary health organizations at the local, state, and national levels, such as tuberculosis, cancer, polio, heart, and crippled children's societies, need trained health educators in their programs.

Actual field practice is a requirement for completion of the program. Ten semester hours of credit are required in the latter part of the second semester of the senior year and consist of supervised practical experience with state and local departments of public health.

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Elementary Composition W131 or W140	2	Elementary Composition W132 or	
Chemistry C100	5	Speech S143	2
Literature, Philosophy, and the Arts		Zoology Z103	5
Sequence	3	Literature, Philosophy, and the Arts	
Physical Education W100	1	Sequence	3
Electives	4	Physical Education W100	1
Orientation to Allied Health Sciences		Electives	4
AH G100*	1		15
	16		

Second Year

Psychology P101	3	Psychology P102	3
Sociology S161	3	Sociology S163	3
Anthropology A103	3	Speech S223	3
Speech S121	2	Journalism J327†	3
Electives	4	Electives	3
	15		15

Third Year

Microbiology M250	3	Physiology P204	5
Microbiology M255	2	Government G104	3
Government G103	3	Psychology P234	3
Anthropology A104	3	Radio and Television R204*	3
Sociology S309	3	Electives	3
	14		17

**Fourth Year
(Medical Center)**

Public Health Organization and		Public Health Education Methods AH E443	3
Administration AH H301	3	Speech Pathology AH D403	2
Statistics AH H304	2	Public Health Field Practice AH E465	10
Environmental Health AH S321	3		15
Epidemiology and Occupational Health			
AH S408	2		
School Health Education AH E440	3		
Community Health Education AH E442	3		
	16		

PUBLIC HEALTH-ENVIRONMENTAL HEALTH

(Department of Preventive Medicine)

Professor Hopper; Associate Professors Adams (Director), Summers; Assistant Professor Spolyar; Instructor Brittain; Lecturers Fassnacht, Fisher, Hert, Jump, Keppler, McCowen.

Environmental health is a branch of the biological sciences dealing directly with the health aspects of man's physical surroundings. Its purpose is two-fold: (1) the control of conditions under which man lives so that hazards leading to disease and injury can be eliminated; (2) the teaching of hygiene and the principles of sanitation to the general public and to others whose activities deal with water, food, air, radio-

* Not required at campuses other than Bloomington.

† Recommended elective. Substitution may be made only with permission of Director.

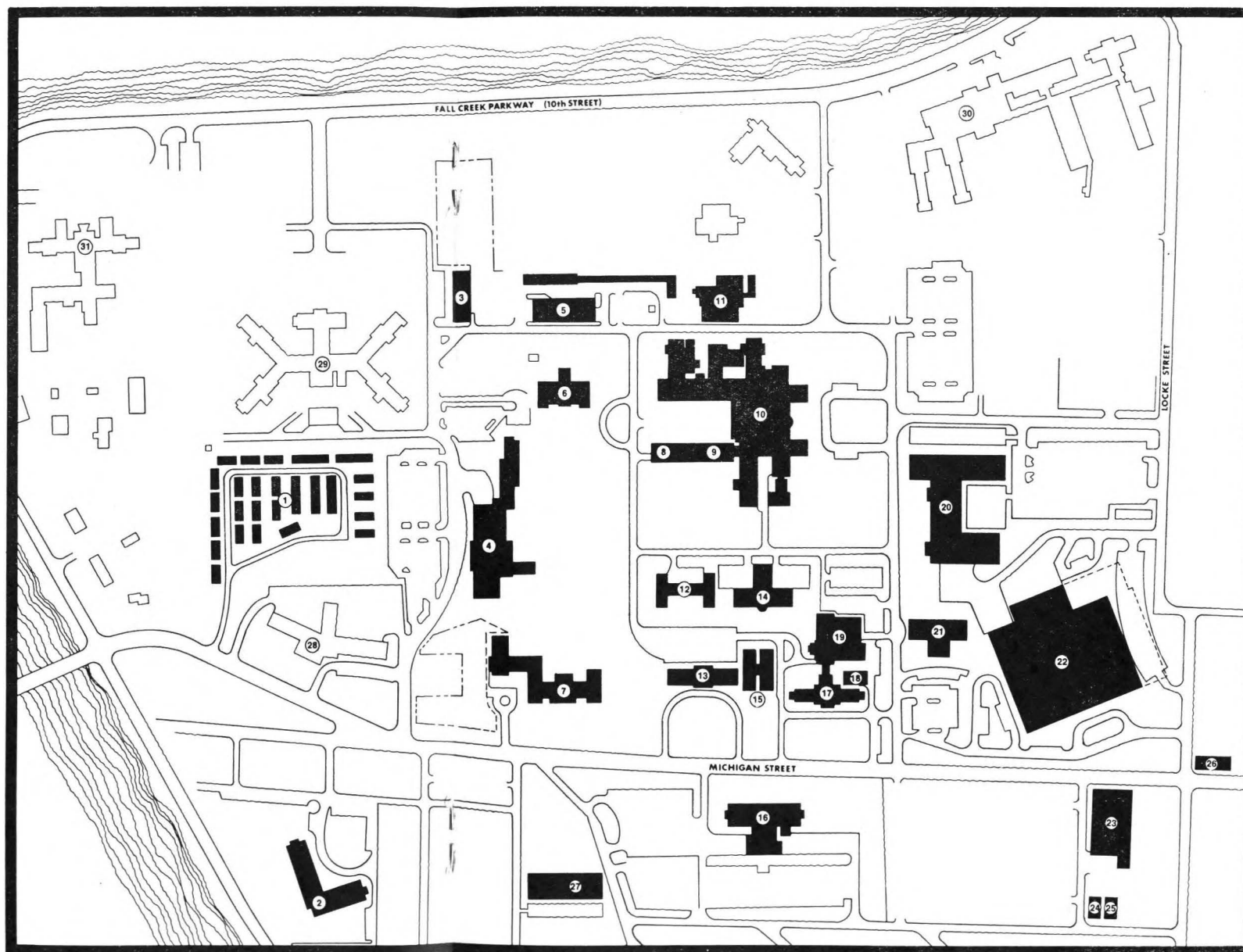


Indiana University at Indianapolis Medical Center

- (12) Administration Building
- (7) Ball Residence
- (23) Bowers Building
- (8) Cancer Research Unit and
Laboratories of Riley Hospital
- (25) Campus Development
- (19) Clinical Building
- (15) Cottages
- (13) Coleman Hospital
- (16) Dental School
- (21) Emerson Hall
- (14) Fesler Hall
- (26) Hospital Accounting and Data Processing
- (3) Institute of Psychiatric Research
- (17) Long Hospital
- (18) Medical Records
- (20) Medical Science Building
- (11) Power Plant
- (27) Preventive Dentistry Research Building
- (10) Riley Hospital for Children
- (9) Riley Hospital Research Wing
- (6) Rotary Building
- (24) Safety Department
- (5) Service Building
- (4) Union Building (including single student dormitory)—
conference rooms, swimming pool, bookstore,
cafeteria and snack bar, barber and beauty shops
- (22) University Hospital
- (2) Warthin Apartments for married students—Housing
Office
- (1) Winona Village—student housing

Neighboring Institutions

- (28) Indiana State Board of Health
- (29) LaRue D. Carter Memorial Hospital
- (30) Marion County General Hospital
- (31) Veterans Administration Hospital



logical health, community wastes, and shelter. Laws and regulations also are involved as they pertain to improvement of community health protection.

Within the last decade great new areas have opened up for the student and professional in environmental health—air pollution control, radiological health, water pollution control, housing, and food technology. Funds for research and study in these fields now exceed the supply of trained personnel to carry on this work.

Upon graduation, students become eligible to take examinations as registered professional sanitarians under laws now in effect in Indiana and 29 other states. Graduates are also eligible to take federal, state, and local examinations for positions in governmental public health agencies. In addition, industry and commerce offer employment. Graduate training under federal scholarships is available. Employment opportunities are now good.

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Elementary Composition W131 or W140	2	Elementary Composition W132 or	
Chemistry C101	5	Speech S143	2
Mathematics M115 or M117	5 or 3	Chemistry C102	5
Physical Education W100	1	Speech S121	2
Electives	3	Fine Arts H100†	3
Orientation to Allied Health Sciences		Government G103‡	3
AH G100*	1	Physical Education W100	1
	17 or 15		16

Second Year

Government G104	3	Physics P100	5
Psychology P101	3	Anthropology A103‡	3
Sociology S161†	3	Sociology S232†	3
Zoology Z103	5	Electives	2
Comparative Literature C225*	2		13
	16		

Third Year

Microbiology M250	3	Physiology P204	5
Microbiology M255	2	Government G321	3
Sociology S309	3	Speech S223	3
Electives	8	Electives	5
	16		16

Fourth Year (Medical Center)

Public Health Organization and		Parasitology and Entomology AH S423	3
and Administration AH H301	3	Public Health Education Methods AH E443	3
Statistics AH H304	2	Public Health Field Practice AH S465	10
Environmental Health AH S321	3		16
Epidemiology and Occupational Health			
AH S408	2		
Food and Dairy Technology AH S428	4		
Elements of Water and Sewage AH S432	2		
	16		

PUBLIC HEALTH ADMINISTRATION (Department of Preventive Medicine)

Professor Hopper (Director); Associate Professor Adams; Assistant Professors Spolyar, Offutt, Rudley; Instructors Smith, Yoho; Lecturers Bland, Fisher, Darrell, Hall; Staff from Indiana University School of Business; Advisory Council from Governmental and Voluntary Health, Hospital, Insurance, and Management Agencies.

* Not required at campuses other than Bloomington.

† Fulfills the Literature, Philosophy, and the Arts Sequence for this program.

‡ Fulfills the Social Sciences Sequence for this program.

There is a challenging future for business-oriented personnel in medical administrative procedures. Health, in its many and varied aspects, has expanded so rapidly that major policy issues involving budgets, insurance, law, and general management require trained people to assist the physician in these areas. Health departments at state, county, and city levels offer opportunities for administrative practice in the development of standards and in professional staff training and evaluation. In addition, voluntary health agencies have awakened the public to the tremendous demands for knowledge and action in health matters and offer attractive positions to those trained in management skills. Other fields include health and hospital insurance plans, county medical societies, nursing homes, and hospitals. Health is personal as well as public; it is dynamic and ranks high on the list of what might be called big business. For students who like to work with others, who want variety and challenge in their work, and who can make decisions, Health Administration is a field with a wide horizon and a bright future.

The Division of Allied Health Sciences in cooperation with the School of Business offers a course of study leading to the degree Bachelor of Science in Public Health with a major in Health Administration. Candidates for this degree must complete three years of preprofessional business courses on the Bloomington campus as outlined in the Basic Business and Economics Core of the School of Business, including the Comprehensive Examination.

RADIOLOGIC TECHNOLOGY

Professors Campbell, Loehr, Miller; Associate Professor Helmen (Director); Assistant Professors Cockerill, Franken, Hornback, Leininger, Mishkin, Ng, Reese, Tosick; Lecturers Foley, Grimwood, Harlow, Moore, Shea, Thayer; Teaching Associates Bettis, Champion, Duncan, Gilliam, Hinderliter, Isaacs (Assistant Director), Jamison, Kehrein (Associate Director), Kidder, McCurn, Treece, Vincent, Williams

College students or graduates of approved high schools are eligible for admission to this two-year course. Students are selected for the course on the basis of their previous educational qualifications and their basic aptitude as determined at the time of personal interview in the Department of Radiology.

Applications for this training program should be filed with the Department of Radiology of the Indiana University School of Medicine before June 1, as they are processed in the order in which they are received. New courses begin each September. Each new class is limited in number. Certain core courses of a general nature are being entered into the curriculum. At the end of the course, students receive the Associate in Science degree from the Division of General and Technical Studies of Indiana University and take the examination of the American Registry of X-Ray Technologists.

The curriculum follows a definite pattern designed to train the technician to become adept in the performance of any technical medical radiological procedure within the admitted limitations of the ethical and medicolegal aspects of his training. The training begins with those principles which are fundamental to the medical profession. Integrated with this are the varied courses in radiological principles and technological procedures.

Similar courses in radiologic technology are offered at Fort Wayne through the Division of General and Technical Studies. Inquiries relative to these programs should be addressed to Dr. Carl Bickley, 1120 South Barr Street, Fort Wayne, or Dr. Charles Helmen, Department of Radiology, Indiana University Medical Center, 1100 West Michigan Street, Indianapolis, Indiana 46202. A similar course is being planned at Indiana University Northwest in conjunction with the Methodist Hospital in Gary.

First Year (Medical Center)

<i>First Semester</i>		<i>Second Semester</i>	
Anatomy and Physiology TAP A100	3	Clinical Practice I TAHS X100	12
Medical Terminology TAHS T100	1	Psychology P101	3
Surgery and Portables TAHS E200	1	Elementary Composition W131 or W140	2
Darkroom Chemistry TCHM C100	1		17
Office Procedure TAHS N100	1		
Radiation Physics TPHY P200	2		
Nursing Procedures TAHS N101	1		
Basic Roentgenographic Technique			
TAHS R101	3		
Principles of Radiology TAHS R102	2		
Principles of Fluoroscopy TAHS R104	1		
History and Ethics THIS H100	1		
	17		

Summer Session

Comprehensive Experienceno credit

Second Year

Clinical Practice II TAHS X200	12	Formulating Technique TAHS F200	3
Sociology S161	3	Radiation Therapy TPHY R202	2
Public Speaking S121	2	Principles of Radiology (Lab) TAHS R103 ..	1
	17	Principles of Radiology II TAHS R202	3
		Advanced Radiographic Technique	
		TAHS R201	3
		Radioactive Isotope Procedure TPHY P201	2
		Pathology TAHS M200	2
			16

Summer Session

Comprehensive Experience no credit

HOSPITAL DIETARY TECHNOLOGY

Associate Professors Irwin, Wilson (Director); Assistant Professors Boucher, McLees, Van Ness; Instructors Abel, Lifsey, Stoddard.

Graduates of approved high schools are eligible for admission to this two-year course. A dietary technician assists a professional dietitian in caring for the nutritional needs of individuals and groups. The program is planned with special emphasis on hospital food service, and graduates of the program are eligible for membership in the Hospital, Institution, and Educational Food Service Society.

Applications for this training program should be filed with the Department of Dietetics at the Indiana University Medical Center, Indianapolis. Classes begin each semester with a limited number of students. Students satisfactorily completing the course receive the Associate in Science degree from the Division of General and Technical Studies of Indiana University.

Inquiries relating to this program should be addressed to Miss Arlene Wilson, Department of Dietetics, Indiana University Medical Center, 1100 West Michigan Street, Indianapolis, Indiana 46202.

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Grammar and Vocabulary I TENG W101	2	Principles of Written Expression TENG W102	2
Principles of Applied Mathematics		Food Purchasing THDT P100	3
TMAT B101	3	Cost Control-Accounting for Dietetics	
Chemistry for Dietetics TCHM D101	5	THDT A101	3
Meal Management THDT W101	3	Sanitation and Safety THDT S101	2
Social Systems in Society TSOC S101	3	Development of Oral Communications	
	16	TCOM C101	2
		Foods I THDT F101	3
			15

Second Year

Quantity Food Production I THDT P101	3	Quantity Food Production II THDT P102	3
Foods II THDT F102	3	Methods of Adult Education TED M101	3
Bacteriology for Dietetics THDT B101	3	Diet Therapy THDT N102	3
Personnel Management THDT J101	3	Institution Equipment THDT P103	2
Nutrition THDT N101	3	Supervisory Techniques THDT J102	3
	—	Psychology in an Acquisitive Society	
	15	TPSY P101	3
			<hr/>
			17

Courses Offered, 1969-70

SCHOOL OF MEDICINE COURSES

(enrollment limited to students in Allied Health Sciences)

Anatomy D323 Anatomy (5 cr.)

Gross human anatomy for physical and occupational therapy students. Predisected material utilized.

Microbiology J207 Microbiology for Dental Hygienists (2 cr.)

Principles and applications of microbiology for dental hygienists.

Microbiology J420 Parasitology for Medical Technologists (2 cr.)

Required for medical technologists; laboratory procedures and identification of the larger parasites of man.

Pathology C477 Pathology (2 cr.)

Lectures on principles of pathology; study of various diseased body tissues.

Physiology F305 Human Physiology (5 cr.)

For physical and occupational therapy students. Animal and human physiology; neuromuscular system, respiration, circulation, digestion, metabolism, excretion, and endocrines. Laboratory work concerned with exercises and demonstrations on neurophysiology and the physiology of muscular activity.

Psychiatry N303 Psychopathology (2 cr.)

Emotional stress and the resultant defense mechanisms; organic brain syndromes, schizophrenic reactions, and psychoneurotic disorders. Lecture and case presentations.

Psychiatry N306 Clinical Psychopathology (1 cr.)

Clinical aspects of deviant behavior through discussion, films, case studies, and hospital visits.

DIVISION OF ALLIED HEALTH SCIENCES COURSES

Cytotechnology

AH A402 General Medical Cytology (3 cr.)

Basic features of cellular morphology, cellular physiology, and cytogenetics, as related to medical cytology; cancer cells presented through lecture, laboratory study, demonstrations.

AH A412 Gynecologic Cytology, Nonmalignant Conditions (3 cr.)

Cell types encountered in normal individuals; cyclic variations; changes in hormonal dysfunction, inflammatory changes.

AH A422 Gynecologic Cytology, Malignant Conditions (3 cr.)

Study of cancer cells of different types and arising in several sites. Course enables student to recognize source and type of lesion from appearance of exfoliated cells.

AH A432 Cytology of Sputum and Bronchial Secretions (3 cr.)

Systematic study of normal, nonmalignant, and malignant cells in lower respiratory system.

AH A442 Cytology of Body Fluids (2 cr.)

Study of cells in effusions associated with nonmalignant and malignant diseases.

AH A452 Cytology of Gastric Secretions, Urine, Spinal Fluid, and Other Secretions (2 cr.)

Review of cells, malignant and nonmalignant, encountered in exfoliates from these sites.

AH A462 Technics in Medical Cytology (2 cr.)

Fixation and staining procedures, preparation of smears, and cell blocks from fluids and other exfoliates; use of millipore filter technic and fluorescence microscopy.

A second six months of informal training in a cytology laboratory under the supervision of a pathologist is necessary to meet the requirement of the Registry of Medical Technologists for certification in exfoliative cytology. This portion of the training does not usually offer University credit. For University credit, if required, see course listed below.

AH A465 Certification Internship (1-6 cr.)

Following supervised internship a final 1-6 credit hours may be earned if desired through clinical practice at the Medical Center.

Public Health Administration

AH B401 Introduction to Hospital Administration I (3 cr.)

General orientation to hospital departments, hospital organization, board of trustees, medical staff, administration, concept of management in a public service enterprise.

AH B402 Introduction to Hospital Administration II (3 cr.)

Role of hospital in community, hospital goals and programs, coordination of hospital departments, managerial evaluation and improvement, relationships to official and voluntary health agencies.

AH B411-B412 Nursing Home Administration I and II (3-3 cr.)

Nursing home regulations, legal aspects, and insurance; personnel management; medical records; diet and food service; rehabilitation; nursing services; psychiatric aspects in handling of geriatric patients; professional standards; use of volunteer groups.

AH B421 Management in Health Organizations I (3 cr.)

Analysis of major policy issues in management of health organizations; establishment of need as basis for proposal and budget; setting of standards; development of programs.

AH B422 Management in Health Organizations II (3 cr.)

Executive and professional staff responsibilities and development; evaluation and utilization of quantitative data collected for management; internal communications and control; emphasis on decision-making process in evaluation and reappraisal.

AH B465 Field Practice (10 cr.)

Supervised field training of nine weeks in administrative practice in voluntary or official health-related agency; student participates in various phases of health administration at the management level.

Medical Technology

AH C400 Laboratory Practice (Introductory) (1 cr.)

Meetings at intervals, during the early period of training; study of laboratory procedures. Includes technical procedures and orientation. (For continuation, see C480.)

AH C401 General Externship I (2 cr.)

Experience in a type hospital with opportunity for independent work. Emphasis on contact with patients.

AH C402 General Externship II (2 cr.)

P: C401. Further experience in a type hospital; opportunity for independent work.

AH C403 General Externship III (2 cr.)

P: C401, C402. Further experience in a type hospital; opportunity for independent work.

AH C405 Medical Laboratory Records (½ cr.)

Required by Registry. Proper procedure of reporting laboratory results; method of distribution throughout various phases of work; experience in office, filing, statistical work.

AH C406 Clinical Chemistry (6 cr.)

Training and experience in clinical chemistry including micro and macro procedures, radioisotopes, instrumentation, and steroid and hormone analysis.

AH C407 Hematology (6 cr.)

Experience in the collection, staining, and counting of blood cells, platelets, and reticulocytes. Experience gained in the study of cellular content of other body fluids. Techniques of sedimentation rates, hematocrits, corpuscular indices and hemoglobin determination. Instruction in use and maintenance of special instrumentation such as electronic cellcounters. Coagulation studies and bone-marrow preparations.

AH C408 Blood Banking (4 cr.)

Review of serologic principles and technical fundamentals of transfusion practice; comprehensive consideration of blood groups and Rh factors; extensive practice with pre-transfusion techniques and safety practices. Other blood types, antigen-antibody relationships and techniques for demonstrating them. Also includes practice in blood donor room procedures. Elementary knowledge of genetics is helpful.

AH C409 Serology (2 cr.)

Flocculation and complement fixation tests for syphilis, both qualitative and quantitative. Preparation of antigens, colloidal gold tests, heterophile antibody tests, and C-reactive protein. Lectures and work in the laboratory and informal discussions. Experimental procedures are also used.

AH C410 Urine Analysis (2 cr.)

Routine urine examination and special tests; laboratory and special lectures.

AH C411 Bacteriology (6 cr.)

Diagnostic procedures as aids to diagnosis of human diseases and methods for isolation and identification of microorganisms. Also a study of the fungi which infect humans, with emphasis on isolation and identification.

AH C412 Topics in Medical Technology (2 cr.)

Surgical pathology, basal metabolism rates, and electrocardiograms will be covered by lecture and clinical experience. Also included will be observations in related areas such as pharmaceutical chemistry and heart research.

AH C413 Clinical Correlation and Theory (2 cr.)

Lectures in physiological chemistry, immunology, and other related subjects combined with demonstrations and ward rounds to emphasize the relationship between laboratory tests and disease states.

AH C414 Honors Course in Medical Technology (Cr. arr.)

Each student is to complete a research paper which will require library and laboratory work. The student will be assigned to a faculty adviser in the area in which she/he does the research.

AH C420 Parasitology for Medical Technologists (2 cr.)

Required for medical technologists; laboratory procedures and identification of the larger parasites of man. This course taught at the regional campuses is "equivalent" to J420 as taught in Indianapolis at the Medical Center by the School of Medicine, Department of Microbiology.

AH C431 Hematology I (2 cr.)

Collecting, staining, and counting blood cells; supervised experience with patients. Experience with specimens of spinal fluid, special determinations (platelets, reticulocytes), and pathologic smears.

AH C432 Hematology II (2 cr.)

P: C431. C432 and C434 offer more experience (than C431 allows) in the same techniques and additional techniques such as sedimentation rate, hematocrit, and the figuring of indices.

AH C434 Hematology III (2 cr.)

P: C431, C432. Continuation of practice and experience in hematologic techniques. Individual projects assigned if student is sufficiently advanced.

AH C440 Bacteriology I (2 cr.)

Diagnostic procedures as means to familiarize student with techniques; work on specimens received from hospital patients under supervision; practical experience with all types of human specimens for bacteriologic and mycologic study.

AH C441 Bacteriology II (2 cr.)

P: C440. Agglutination and precipitin techniques and their special application to agglutination titers and the use of antibiotics. Special assignments to provide experience with organisms infrequently encountered.

AH C442 Bacteriology III (2 cr.)

P: C440, C441. Student should be able to handle usual and somewhat unusual hospital bacteriologic and mycologic problems independently.

AH C450 Serology I (2 cr.)

Flocculation and complement fixation types of serologic tests for syphilis; familiarity with Mazzini, Kline, V.D.R.L., and Kolmer complement fixation tests; emphasis on reading tests; lectures and demonstrations, including the cardiolipin antigen and methods for distinguishing false positives.

AH C451 Serology II (2 cr.)

P: C450. Additional experience (for students with satisfactory proficiency in C450) in adapting complement fixation, agglutination, hemagglutination, precipitin, and flocculation technique to diagnostic procedures.

AH C460 Surgical Pathology I (2 cr.)

Actual experience with surgical specimens removed from patients in the various hospitals; stresses rapid completion of histologic slides for microscopic examination.

AH C461 Surgical Pathology II (2 cr.)

P: C460. Additional practice in preparation of histologic slides for microscopic examination. In addition to the hexamatoxylin and eosin stain, a limited number of special techniques are required, including experience with frozen sections.

AH C471 Clinical Chemistry I (2 cr.)

Training and experience with more frequently used chemistry tests, e.g., determination of sugar and urea nitrogen; automated and manual methods.

AH C472 Clinical Chemistry II (2 cr.)

P: C471. Limited experience with less frequent special procedures.

AH C473 Clinical Chemistry III (2 cr.)

P: C471 and C472. Special equipment utilization; preparation and maintenance of stock and solutions.

AH C474 Radioisotopes I (1 cr.)

Information and techniques applicable to use of radioactive materials in clinical laboratory.

AH C475 Radioisotopes II (2 cr.)

P: C474. Extended experience and practice with radioactive materials under special supervision. Enrollment must be arranged by conference with faculty.

AH C476 Chemistry IV (2 cr.)

P: C471, C472. Advanced procedures, method developments, special projects.

AH C477 Chemistry V (2 cr.)

P: C471, C472. Training and experience in special micro procedures, technical and methodological.

AH C478 Instrumentation (cr. arr.)

Theory and practice with electronics as applied to instrumentation and clinical chemistry. Credit variable on basis of 1 credit hour per each 60 clock hours.

- AH C479 Physiological Chemistry for Senior Medical Technologists (2 cr.)**
P: 15 hours in chemistry, one semester of calculus, or consent of instructor. Introduction to carbohydrate, amino-acid, and lipid metabolism. Basic endocrinology: enzymes, biosynthesis of steroid hormones.
- AH C480 Clinical Laboratory Diagnosis (1 cr.)**
P: C400. Continuation of material in C400. Ethics, relation with patients, techniques and interpretation of results, special equipment, maintenance of various types of equipment and supplies; miscellaneous subjects.
- AH C483 Specialty Externship I (2 cr.)**
Special practice in affiliated institutions, for students with proficiency in required subspecialties. Provides individual electives for special interests.
- AH C484 Specialty Externship II (2 cr.)**
Special practice in affiliated institutions, for students with proficiency in required subspecialties. Provides individual electives for special interests.
- AH C485 Specialty Externship III (2 cr.)**
Special practice in affiliated institutions for students with proficiency in required subspecialties. Provides individualized electives for special interests.
- AH C489 Basal Metabolic Techniques (½ cr.)**
Special theory and techniques. Actual experience with various machines. Successful tracings required.
- AH C490 Electrocardiographic Technique (½ cr.)**
Lectures on theory and procedures; actual experience with apparatus; successful electrocardiograms required.
- AH C491 Blood Bank I (2 cr.)**
Review of serologic principles and technical fundamentals of transfusion practice; comprehensive consideration of blood groups and Rh factors, extensive practice with pre-transfusion techniques and safety practices. Other blood types, antigen-antibody relationships and techniques for demonstrating them. Elementary knowledge of genetics is helpful.
- AH C492 Blood Bank II (2 cr.)**
P: proficiency in C491. Transfusion service bloods provide problem cases in isoimmunization and sensitization, Rh titration, etc. Responsibility for blood bank operation and application to special transfusion problems placed on the student.
- AH C493 Blood Bank III (2 cr.)**
P: C491, C492. Required for students working toward special certificate in blood banking. Emphasis on supervision, reference techniques, and such accessory functions as plasma production.

Public Health Dental Hygiene

- *AH D401 Clinical Supervision (2 cr.)**
Supervisory experience in clinics and laboratories involved in teaching students enrolled in Dental Hygiene curriculum; problems incident to patient-student and instructor-student relationships.
- AH D403 Speech Pathology (2 cr.)**
Orientation to speech pathology; emphasis on dental-related problems.
- AH D405 Community Dental Hygiene (3 cr.)**
Describes organization and administration of various types of programs of the Dental Health Division of Indiana State Board of Health.
- AH D465 Public Health Field Practice (5 cr.)**
Supervised field training consisting of five-week assignment with an official health agency, permitting the student to observe and participate in all phases of dental health.
- †D HYG G999 Public Health Practice (1-6 cr.)**
Functions, scope, and historical background of public health; organization of official and voluntary public health agencies with emphasis on their dental health programs.

Public Health Education

- AH E440 School Health Education (3 cr.)**
The school health movement, including the development, present-day policies, programs and problems; health services, environmental factors, communicable disease control, health instruction, and hygiene of the school day.
- AH E442 Community Health Education (3 cr.)**
Intensive study of social, psychological, economic, and cultural factors influencing successful application of the health sciences; relationship between different public health disciplines and agencies and techniques employed.

* Admission by permission of the Director of Dental Hygiene, School of Dentistry.

† Offered in the School of Dentistry.

AH E443 Public Health Education Methods (3 cr.)

Usual techniques of group work with investigations of social and psychological factors which determine effectiveness in promoting public health. Laboratory time provides opportunity for competence in group work and in design and use of promotional materials.

AH E465 Public Health Field Practice (10 cr.)

Supervised field training is done on full-time basis for nine weeks in selected official and voluntary health agencies. Students assist in planning and conducting health education activities.

Inhalation Therapy**AH F201 Inhalation Therapy I (8 cr.) (460 clock hrs.)**

Lecture and demonstrations in various procedures and techniques; objectives of inhalation therapy. Organization and function of an inhalation therapy department, care of equipment, ethics, and experience in patient treatment in which inhalation therapy techniques are applied.

AH F202 Inhalation Therapy II (8 cr.) (454 clock hrs.)

P: F201. Advanced experience in patient treatment supervised by registered inhalation therapist in facilities affiliated with educational program.

Public Health General**AH H301 Public Health Organization and Administration (3 cr.)**

Historical background, early development, objectives of public health; its structure at federal, state, and local level; legal and financial aspects, organization, administration, program content; function of each professional category of personnel with emphasis on community understanding and cooperation.

AH H304 Statistics (2 cr.)

Collection, tabulation, and elementary analysis of data; measures of central tendency, of variability, tests of significance, sampling procedures; prepares student to draw justified conclusion from numerical data.

AH H490 Research (cr. arr.)

For advanced students only. Supervised research problems in field of public health.

Medical Records**AH M322 Hospital Organization and Management (2 cr.)**

Orientation to hospital departments; hospital organization; inter- and intra-relationships of hospital and community agencies.

AH M330 Medical Terminology (3 cr.) (2 lectures—2 lab. hrs.)

Understanding and use of medical-profession vocabulary; emphasis on speaking, reading, and writing skills.

AH M411-M412 Medical Record Science I-II (5-5 cr.)

History of medical records, report preparation, quantitative analysis, coding and indexing procedures, research techniques, medical statistics, ethics, methods of securing and preserving medical records, principles and practices for administration of medical records departments, legal aspects and human relations. Second semester includes seminar on problems in medical records departments.

AH M441 Directed Practice Experience I (4 cr.)

Supervised learning experience to develop insight, understanding, and skill in medical records procedures; work with other professional and nonprofessional personnel.

AH M442 Directed Practice Experience II (6 cr.)

Problem assignments of medical records departments and personnel. Final month spent in an affiliation in the medical records department of another hospital, in or out of Indianapolis.

AH M445 Medicine and the Law (2 cr.)

Presentation of concepts of law in medical and/or health-related area as applied to the physician, the hospital, health institutions, the medical record, and the individual health worker.

Physical Therapy**AH P204 Introduction to Physical Therapy (2 cr.)**

Introduction to physical therapy profession; educational requirements, treatment techniques, and professional opportunities. Open to all students (Bloomington campus).

AH P382 Tests and Measurements (Physical) (3 cr.)

Methods and devices used in measuring and testing in physical therapy. Lecture and laboratory.

AH P384 Therapeutic Exercise I (2 cr.)

Application of treatment techniques for specific disabilities, including practical application of various types of apparatus. Lecture and laboratory.

AH P461 Physical Agents I (2 cr.)

Instruction and practice in application of massage, heat, cold, water, and light. Lecture and laboratory.

AH P462 Physical Agents II (3 cr.)

Instruction and practice in electrical testing and application of electrotherapy procedures. Lecture and laboratory.

AH P478 History, Administration, and Professional Relationships (2 cr.)

Historical background of physical therapy, organization and administration of agencies related to physical therapy, and professional relationships with allied medical services.

AH P481 Therapeutic Exercise II (3 cr.)

Instruction and practice in ambulation, activities of daily living, and use of prosthetic and orthotic devices. Lecture and laboratory.

AH P483 Applied Neurophysiology (3 cr.)

P: Physiology F305. Emphasis on neurophysiological concepts for developing treatment procedures in physical therapy; introduction to neuromuscular facilitation procedures. Lecture and laboratory.

AH P485 Applied Physical Therapy (2 cr.)

Administration, ethical conduct, legislation, medicolegal considerations, and clinical problems related to physical therapy.

AH P491 Clinical Education I (2 cr.)

Introductory experience in patient treatment supervised by registered physical therapists in facilities affiliated with the educational program.

AH P492 Clinical Education II (8 cr.)

Advanced experience in patient treatment supervised by registered physical therapists in facilities affiliated with the educational program.

Public Health-Environmental Health

AH S321 Principles of Environmental Health (3 cr.)

Objectives of environmental health control; water supplies, sewage systems, solid waste handling, air hygiene, food and milk sanitation, housing, radiological health, and legal and administrative phases; laboratory periods in sanitary chemistry and bacteriology.

AH S408 Epidemiology and Occupational Health (2 cr.)

Cause, mode of transmission, and methods of prevention in control of common communicable diseases; methods of modern preventive medicine; industrial and occupational health hazards involving protective devices and measures for employee protection.

AH S423 Parasitology and Entomology (3 cr.)

Survey of parasites and insects of public health importance affecting man; laboratory exercises in identification of insects; study of control measures and use of modern insecticides; rodents as disease vectors.

AH S428 Food and Dairy Technology (4 cr.)

Food and dairy technology, food and dairy processing methods; field trips to processing plants for observation; legal definitions of various products; control techniques.

AH S432 Elements of Water and Sewage (2 cr.)

Basic principles of water supply; epidemiology of water, including interpretation of laboratory examinations; sewage disposal studies include private installations; use of larger facilities for sewage treatment at schools, institutions, and housing developments; solid waste disposal systems.

AH S465 Public Health Field Practice (10 cr.)

Supervised field training of nine weeks with local health department or Indiana State Board of Health; variety of health problems studied.

Occupational Therapy

AH T203 Occupational Therapy Theory I (2 cr.)

Introduction to field of occupational therapy; various functions of occupational therapist. Open to all students (Bloomington campus).

AH T300 Occupational Therapy History (1 cr.)

History and trends in field of occupational therapy; orientation to various specialties; organization of the national and local associations.

AH T301 Occupational Therapy Organization and Administration (2 cr.)

Establishment and operation of an occupational therapy department, planning, equipping, and maintaining the department; methods of record keeping and reporting; ethical implications and hospital relationships.

AH T323 Human Behavior (2 cr.)

Study and discussion of personality theories, behavioral traits, and their application to occupational therapy treatment.

AH T324 Hospital Clerkship, Psychiatry (1 cr.)

Study and observation of occupational therapy treatment in several psychiatric hospitals.

AH T351 Therapeutic Techniques I (5 cr.)

Woodwork and plastics; care, use, and repair of simple hand and machine tools including safety techniques; various materials and techniques of fabrication, minor craft techniques.

AH T352 Therapeutic Techniques II (2 cr.)

Needle skills and minor crafts; knitting, crocheting, embroidery, hand sewing; basic leather work and small craft projects.

AH T360 Psychosocial Dysfunction (5 cr.)

Combined clinical and class study of treatment of psychiatric patients in occupational therapy.

AH T381 Personality Development of the Child (2-3 cr.)

Traces the psychological, emotional, intellectual, motor, and linguistic development of the human organism from birth to adolescence. Emphasis on causal relationships. Theoretical framework within which to view child development is presented.

AH T451 Therapeutic Techniques III (2 cr.)

Continuation of T352.

AH T452 Prevocational Techniques (2 cr.)

Survey of vocational skills and instruction in methods of job and activity analysis. Under supervision, students evaluate clients, administer tests, and make recommendations for placement.

AH T453 Therapeutic Techniques IV (1, 2, or 3 cr.)

Supplemental background in technical skills to meet the needs of transfer students.

AH T454 Activities of Daily Living (2 cr.)

Laboratory course on materials, equipment, and techniques to aid the handicapped in attaining maximum self-sufficiency—special equipment such as slings and wheelchairs; experience in making and fitting hand splints.

AH T460 Physical Dysfunction (4 cr.)

The treatment of physically handicapped patients in occupational therapy. A correlation of clinical and class presentations.

AH T490 Physical Dysfunction Practicum (4 cr.)

Neuromuscular facilitation techniques, perceptual testing techniques, cerebral palsy, amputees, and splinting.

A minimum of six months of clinical training is required for registration as an occupational therapist. Three months of this training may be taken during the summer between the junior and senior years, the remainder during the senior year. Students are assigned to various hospitals by the Director of Clinical Education.

AH T495 Clinical Education I (6 cr.)

Three-month internship in psychiatry. Assigned hospitals.

AH T496 Clinical Education II (6 cr.)

Three-month internship in rehabilitation. Assigned hospitals.

***AH T501 Scientific Inquiry in Health Professions (3 cr.)**

Analysis and interpretation of data; introduction to theory of advanced statistical techniques; principles of research design appropriate to health professions.

AH T525 Physical Therapy Curriculum Development (3 cr.)

Principles of curriculum construction. Content, material, and methods of instruction in physical therapy. Structure and organization of physical therapy curriculum in educational institutions. Educational implications of various levels of preparation in physical therapy.

AH T780 Correlation Seminar in Physical Therapy (3 cr.)

P: P503, consent of instructor. Individual and group study focusing upon research relevant to physical therapy education and practice. Critique of research problems and methodology, with correlation and integration of various specialization areas for physical therapy.

AH T695 Practicum in Physical Therapy Education (3 cr.)

P: consent of instructor. Relating theory to practice through supervised teaching experience in the physical therapy curriculum. Emphasis on planning, guiding, and evaluating learning experiences; participation in conferences with faculty on physical therapy education.

***AH T507 Construction and Analysis of Achievement Tests (3 cr.)**

Principles of construction and interpretation of written achievement tests and other evaluative procedures applied to physical therapy education. Project is required to apply the principles involved.

***AH T653 Management Procedures (3 cr.)**

Techniques of office management, management of funds, accounting, records and reports, purchasing, and principles of effective supervision and administration in an academic or clinical setting.

* Open to students enrolled in other curricula in the Division of Allied Health Sciences.

***AH T561 Health Professions and Community (3 cr.)**

Introduction to public health and functions of voluntary and official health agencies. Personal and community health needs and trends influencing education, practice, and future developments in allied health professions.

AH T599 Master's Thesis in Physical Therapy (3 cr.)

Individual investigation in the form of an organized scientific contribution or a comprehensive analysis in a specified area related to the profession of physical therapy.

AH T641 Advanced Neuromuscular Anatomy and Physiology (3 cr.)

Presentation of functional anatomy and physiology of the neuromuscular system. Designed to provide adequate foundation for understanding principles and theories of treatment in neuromuscular dysfunction.

AH T642 Theories and Procedures of Treatment in Neuromuscular Dysfunction (3 cr.)

P: T641. Critical analysis of leading theories and techniques of treatment in neuromuscular dysfunction and their implications for practice. Develops competence in the use of special procedures including synthesis and interpretation of knowledge and theories in planning a therapeutic program.

AH T590 Research in Physical Therapy (cr. arr.)

Individual research.

Occupational Therapy-Physical Therapy

AH W312 Psychological Aspects of Physical Disability (2 cr.)

Lectures and discussion on psychological problems resulting from physical disability and their implications on patient treatment.

AH W324 Applied Neuroanatomy (Section I, 2 cr.; Section II, 3 cr.)

P: Anatomy D323. Emphasis on structure and gross function of nervous system as a basis for clinical neurology.

AH W373 Child Development (3 cr.)

Physical, mental, social, and emotional development of children from birth through adolescence; emphasis on development of normal children, although problems of handicapped children will be considered.

AH W376 Kinesiology (3 cr.)

Principles of joint and muscle functions; muscle action in various physical activities.

AH W374 Clinical Lectures I (3 cr.)

Lectures in medicine, surgery, and pediatrics.

AH W471 Clinical Lectures II (3 cr.)

P: AH D323, AH W324, AH C477. Lectures and clinical presentations in orthopedics and neurology.

AH W472 Clinical Lectures III (2 cr.)

Lectures and clinical presentations in dietetics, geriatrics, obstetrics, gynecology, urology, otolaryngology, dermatology, ophthalmology, public health problems, and other pertinent specialties.

Radiologic Technology

TPHY P200 Radiation Physics (2 cr.)

Fundamentals of physics of electricity and radiant energy; physics and radiology.

TAP A100 Anatomy and Physiology (3 cr.)

Normal structure and function of human body; emphasis on topographic and radiographic anatomy.

TAHS T100 Medical Terminology (1 cr.)

Meanings and derivations of medical and related words.

THIS H100 History and Ethics (1 cr.)

Important historical events in physics leading to discovery of X-rays; duties and responsibilities of the technician to patients, doctors, and general hospital personnel in matters of medical ethics.

TAHS E200 Surgery and Portables (1 cr.)

Students assume responsibility in taking of emergency examinations of critically ill patients; use of bedside equipment and operating room facilities.

TCHM C100 Darkroom Chemistry (1 cr.)

Composition and preparation of chemicals used in developing process and safe handling of radiographic film.

TAHS N100 Office Procedure (1 cr.)

Systematic filing of films, charts, and reports; public relations and legal considerations.

TAHS N101 Nursing Procedures (1 cr.)

Duties in personal care of patient; some emergency and aseptic technique, contagious diseases.

* Open to students enrolled in other curricula in the Division of Allied Health Sciences.

TAHS R101 Basic Roentgenographic Technique (3 cr.)

Basic fundamentals concerned with production, analysis, and recording of X-ray image; basic factors and properties in medical radiography in relation to diagnostic radiographic exposure and in therapeutic application of such energy.

TAHS R102 Principles of Radiology I (2 cr.)

Study of factors involved in film quality including protection, application of accessory devices, and capabilities and limitations of X-ray equipment.

TAHS R103 Principles of Radiology (Lab) (1 cr.)

Laboratory experience in applying principles of radiation exposures.

TPHY P202 Radiation Therapy (2 cr.)

Various types of radiation therapy devices, their application to disease, types of treatments given, positioning of patients, and recording of treatments.

TAHS F200 Formulating Technique (3 cr.)

Technical factors used to produce good radiographs; principles in making exposure charts.

TAHS R104 Principles of Fluoroscopy (1 cr.)

Modern use of fluoroscopy in radiology.

TAHS R202 Principles of Radiography II (3 cr.)

Radiation protection factors involved in film quality including application of accessory devices and capabilities and limitations of X-ray equipment.

TAHS R201 Advanced Radiographic Positioning (3 cr.)

Lecture and laboratory exercises explaining advanced positioning techniques with emphasis on pediatric techniques, cineradiography, angiography, and less common procedures.

TPHY P201 Radioactive Isotope Procedures (2 cr.)

Basic nuclear physics with an introduction to basic instrumentation and clinical application of medical isotopes.

TAHS M200 Pathology (2 cr.)

Orientation to study of abnormal structure and function of human body.

CORE AND ELECTIVE COURSES

Anatomy and Physiology

A210 Elementary Human Anatomy (5 cr.)

Introduction to basic structure of human body. Laboratory study of demonstration dissections and other illustrative material.

A464 Histology (5 cr.)

P: A210, Zoology Z103, or equivalent. Microscopic structure of mammalian tissues and organs.

P120 Human Anatomy and Physiology (7 cr.)

Introduction to the basic structure and function of the human body with laboratory studies of the gross anatomy, histology, and general physiology of the various body systems. For students in the Associate of Arts in Nursing program. Taught at campuses other than Bloomington.

P204 Elementary Human Physiology (5 cr.)

Lectures and laboratory on blood, circulation, respiration, digestion, metabolism, excretion, endocrines, muscle, nerve, special senses, and central nervous system.

Anthropology

A103 General Anthropology I (3 cr.)

Man, his biological evolution, and his archaeological history through stone and metal ages.

A104 General Anthropology II (3 cr.)

World ethnography, linguistic groupings, and social processes that influence behavior.

A303 Survey of Anthropology I: Prehistory and Races (3 cr.)

Introductory course for more advanced students. Man's place in nature, emergence of man and contemporary races, development of culture from Paleolithic onward, problems arising from interaction of biological and cultural phenomena. Not open to students who have had A103.

A304 Survey of Anthropology II: Culture, Language, Personality (3 cr.)

Introduction to contemporary primitive peoples: culture patterns, diffusion, functions. Language as structure and as social reality. Modal personality and deviants as reflected in primitive cultures. Not open to students who have had A104.

A311 Bioanthropology (5 cr.)

P: A103, Zoology Z103, or Biology B100. Laboratory on bioanthropology of man: basic biological principles, morphology, function, evolutionary history. Man's evolution from lower forms, environmental factors, speciation and differentiation into varieties, mixture, growth, sexual differences, constitutional variability.

Biology

B100 Man and the Biological World (5 cr.)

Principles of biological organization, from molecules through cells and organisms to populations. Emphasis on processes common to all organisms. For students with no professional interest in biology. Not open to those with credit in Botany B101 or Zoology Z103.

Botany

B320 Microtechnique (4 cr.)

P: B101, Zoology Z103, or equivalent. Preparation of plant and animal materials for microscopic study. Paraffin, celloidin, maceration, clearing, and smear techniques.

Business

C300 Office Management I (2 cr.)

Principles of scientific office management and the responsibilities of management for office services, layout, space utilization, furniture and equipment, machines and appliances, branch office management, unions, personnel problems, training of workers, costs, and methods and procedures.

C430 Office Management II (3 cr.)

P: X391. Open to graduate students by permission of instructor. Administration of the office services of duplicating, filing, and records management, machine transcription and typewriting, mail, calculating, communication, reception, travel, and library services. Methods of organizing and operating services, cost controls, and procedures and effective practices; laboratory work required.

C404 Office Systems and Control (3 cr.)

P: X391. Open to graduate students by permission of instructor. Organization and administration of office systems work; systems analysis techniques; simplification and standardization of procedures; office equipment and systems design; procedure writing, forms design; standards and controls. Applications of systems analysis and work measurement techniques.

F260 Personal Finance (3 cr.)

Financial problems encountered in managing individual affairs; family budgeting, installment buying, insurance, home ownership, and investing in securities. No credit for juniors and seniors in School of Business.

J301 Organizational Behavior and Leadership (3 cr.)

P: Psych. P101, Soc. S161. Nature of human behavior in organizations as function of the individual, the groups within which he interacts, and the organizational setting. Emphasis on application of behavioral science concepts and findings to individual behavior and organizational performance.

K201 The Computer in Business (2 cr.)

Introduction to digital computers and illustrations of their use in business. Stored program concept, types of programming languages, instruction in a specific compiler language; utilization of Business Computing Center. Impact of computers upon business management and organization.

W100 Business Administration: Introduction (3-4 cr.)

Business administration from standpoint of manager of a business firm operating in the contemporary economic, political, and social environment.

W300 Principles of Management and Administration (3 cr.)

P: Econ. E201-E202. Fundamentals of administrative staff and operative management. Successful management principles and techniques for all fields of business: business objectives, policies, functions, executive leadership, organization structure and morale, operative procedures, and control procedures.

Chemistry

C100 Chemistry (5 cr.)

High school chemistry or physics recommended. Fundamental principles, including organic chemistry and biochemistry, with illustrations of scientific reasoning and applications. For students in programs requiring only one semester of chemistry. Lectures, recitation, laboratory.

C101 Elementary Chemistry I (5 cr.; 3 cr. without lab.)

Essential principles of chemistry. When followed by C102, satisfies programs that require only two semesters of chemistry. Admission to advanced courses on basis of C101-C102 granted only in exceptional cases. Lectures, recitation, laboratory.

C102 Elementary Chemistry II (5 cr.)

P: C101 (5 cr.). Continuation of C101. Introduction to organic chemistry and biochemistry; organic compounds and their reactions. Lectures, recitation, laboratory.

C105 Principles of Chemistry (5 cr.)

P: two years of high school algebra or equivalent; placement examination or 13 hours of college credit. Basic principles, including stoichiometry, equilibrium, atomic and molecular structure. Lectures, recitation, laboratory. Credit not given for both C101 and C105.

C106 Quantitative Chemistry (5 cr.)

P: C105 or exemption by examination. Solution equilibria, structures and properties of inorganic compounds. Lectures, recitation, laboratory. Laboratory based on elementary quantitative analysis. Credit not given for both C102 and C106.

C313 Clinical Chemistry (3 cr.)

P: C341. Introduction to the theory and operation of basic instrumental and other methods used in the practice of clinical chemistry. Primarily for students in programs of the Division of Allied Health Sciences and students in other areas of applied biology. Credit is not applicable toward meeting the concentration-group requirements for a degree in chemistry.

C341 Organic Chemistry I Lectures (3 cr.)

P: C106; C343 concurrently or consent of chemistry undergraduate adviser. Chemistry of carbon compounds. Nomenclature; qualitative theory of valence; structure and reactions. Syntheses and reactions of major classes of monofunctional compounds.

C343 Organic Chemistry I Laboratory (2 cr.)

P: C341 concurrently. Laboratory instruction in the fundamental techniques of organic chemistry and the use of general synthetic methods.

Classics**C205 Classical Mythology (2 cr.)**

Basic classical myths, with illustrations from art and examples of their literary use.

C209 Greek and Latin Elements in Medical Terminology (2 cr.)

Basic vocabulary of some 1,000 words, together with materials for formation of compounds, enables student to build working vocabulary of several thousand words. Designed for those intending to specialize in medicine, nursing, dentistry, or microbiology.

Comparative Literature**C145 Major Themes and Characters in World Literature I (3 cr.)**

Comparative analysis of the literary treatment of mythical themes and archetypal characters in different periods and traditions: Electra (Euripides, O'Neill, Giraudoux), Tristan (Gottfried, Tennyson, Wagner), Faust (Marlowe, Goethe), Don Juan (Tirso de Molina, Molière, Pushkin, Shaw). Recommended for majors.

C146 Major Themes and Characters in World Literature II (3 cr.)

Comparative analysis of the literary treatment of historical characters and themes: Julius Caesar (Plutarch, Shakespeare, Wilder), Joan of Arc (Voltaire, Schiller, Shaw, Anouilh), the French Revolution and Napoleon (Carlyle, Stendhal, Tolstoy, Büchner, Weiss). Recommended for majors.

C225 Modern Literature and the Arts (2 cr.)

Emphasis on similarities and differences between modern literature, music, and the fine arts. Analysis of various art forms.

Economics**E201-E202 Principles of Economics I-II (3-3 cr.)**

P: sophomore standing; freshmen may enroll when so advised by Junior Division counselors. Introduction to economic principles and problems: economic organization, production, consumption, distribution of wealth and income, money and banking, value and the pricing process, business cycles, risk and insurance, labor problems, industrial monopolies, international economic relations.

English**W131-W132 Elementary Composition I-II (2-2 cr.)**

Progresses from practice of simple description, narration, and exposition to practice of persuasion and documentation in support of a thesis.

W140 Elementary Composition, Special Program (2 cr.)

To be taken by specially qualified students in place of W131.

L101-L102 Freshman Literature I-II (3-3 cr.)

Literary masterpieces from Homer to the present. Aims to teach thoughtful, intensive reading, to introduce students to aesthetic values in literature, and to make students aware of the enjoyment of reading.

The following courses are open to sophomores, juniors, and seniors and to second-semester freshmen who have received a grade of B or above in L101:

L202 Literary Interpretation (3 cr.)

Close analysis of representative texts (poetry, drama, fiction) designed to develop art of lively, responsible reading through class discussion and writing of papers. Attention to literary design and critical method. Recommended for students majoring in English or other literatures.

L203 Introduction to Drama (3 cr.)

Representative group of significant plays to acquaint students with characteristics of drama as a type of literature.

L204 Introduction to the Novel and Short Story (3 cr.)

Representative works of fiction; stresses structural technique in the novel, theories and kinds of fiction, and thematic scope of the novel.

L205 Introduction to Poetry (3 cr.)

Kinds, conventions, and elements of poetry in a selection of poems from several historical periods.

L206 Introduction to Biography (3 cr.)

Aims, techniques, and development of biographical writing; the familiar essay as a form of self-revelation; diaries and letters as forms and as materials of biography.

Fine Arts

H100 Art Appreciation (3 cr.)

Objectives: to acquaint students with outstanding works of art and to provide an approach to appreciation through knowledge of purposes, techniques, form, and content.

H223-H224 Introduction to History of Art I-II (3-3 cr.)

Prerequisite to all 300-400 history of art courses. History of art in relation to general historical and social developments from prehistoric to recent times. Emphasis on great periods and styles.

S101 Introduction to Design (2 cr.)

Experimental, exploratory course in two- and three-dimensional design to broaden student's visual vocabulary and give him new insights into structure of nature and its visual effects. Development and coordination of perceptual and manual skills.

S102 Color and Calligraphy (2 cr.)

P: S101. Color phenomena and their exploration, both two- and three-dimensionally. History and development of lettering and its use in graphic design. Exercises in lettering.

S135 Introduction to Drawing (3 cr.)

Development of basic visual awareness; seeing, representing, and, to a lesser extent, inventing on a two-dimensional surface. Problems in handling placement, scale, space, volume, light, and formal articulation. Little emphasis on individual expression or experimentation.

S136 Pictorial Composition (2 cr.)

P: S135. Continues exploration of basic modes of visual presentation in drawing and introduces color as structuring element of painting. Media: drawing and watercolor.

French

F101-F102 Elementary French I-II (5-5 cr.)**F103 Intermediate French (5 cr.)**

For students from secondary school placed into second semester of first year. Credit is not allowed for both F102 and F103.

F201-F202 Second-Year Composition and Oral Practice I-II (2-2 cr.)**F210 Second-Year Composition, Oral Practice, and Reading (5 cr.)**

Combines work of F201 and F211 into single unified course.

F211-F212 Modern French Prose I-II (3-3 cr.)

Geography

G107 Introduction to Physical Geography (5 cr.; 3 cr. without lab.)

Physical characteristics of earth's surface and their interrelations. Landforms, vegetation, soils, weather, climate.

G210 Introduction to Human Geography (3 cr.)

A study of geographic patterns and interrelationships as illustrated by the analysis of selected major world regions.

G213 Introduction to Economic Geography (3 cr.)

Principles of economic geography including theories concerning industrial location, competition for land, economic nature of resources, and geographic background of interregional trade.

G304 Climatology (3 cr.)

P: G107, Mathematics M115 or equivalent. Systematic and regional study of world climates. Principles and methods of physical and dynamic climatology. Climatic classification.

G310 Geography of Settlement (3 cr.)

P: 3 hours of geography or junior standing. Interrelations between population distribution, settlement patterns, and selected phenomena of physical and cultural environment.

G313 Political Geography (3 cr.)

P: 3 hours of geography or advanced courses in history or government or special permission. Geographical influences which have affected and continue to affect development of political units, such as nations, states, and parties, as background for better understanding of current events.

Geology

G100 Earth Science: Geologic Aspects (5 cr.)

Broad study of the earth. The earth in the solar system, earth's atmosphere. Formation and modification of earth materials, landforms, continents, and oceans throughout geologic time. Geological record in selected areas. Lectures, laboratory, recitation, field trip.

G105 Elements of Geology (5 cr.)

Basic concepts in study of earth and its history. Relationships between geologic time, earth materials, and geologic forces that create and modify minerals, rocks, landforms, continents, and ocean basins. Three lectures, two laboratories, field trips.

G106 Minerals and Rocks (5 cr.)

P: G100, G105, or T305; P or concurrent: college-level course in chemistry. Crystallography: crystal classes, habit, twinning. Mineralogy: description, identification, association, occurrence, and use of common and important minerals. Igneous, sedimentary, and metamorphic rocks: origin, composition, characteristics, classification. Laboratory identifications.

German

G101-G102 Elementary German I-II (5-5 cr.)

G103 Intermediate German (5 cr.)

For students from secondary school placed into second semester of first year. Credit is not allowed for both G102 and G103.

G210 Second-Year Composition, Conversation, and Reading I (5 cr.)

G211 Second-Year Reading I (3 cr.)

Terminal course; only for students with 13-hour language requirement.

G212 Second-Year Reading II (3 cr.)

G220 Second-Year Composition, Conversation, and Reading II (5 cr.)

G222 Second-Year Composition and Conversation II (3 cr.)

G232 Scientific German (3 cr.)

Credit not given for both G212 and G232.

Government

G103 Introduction to American Government I (3 cr.)

Brief introductions to nature of government and its forms and to modern theories of its function. Origin and nature of the American federal system and its present political party base.

G104 Introduction to American Government II (3 cr.)

P: G103. Democratic theory and totalitarian theory; formulation and application of American foreign policy.

G213 Introduction to World Politics I (3 cr.)

Causes of war, nature and attributes of the state, imperialism, international law, national sovereignty, arbitration, adjudication, international organization, major international issues.

G321 Government and Administration of Urban Communities (3 cr.)

P: G103-G104 or consent of instructor. Growth, development, and problems of urbanism, particularly in political area. Municipal administration and policy-making; effects of municipal organization, legal status, political parties, invisible government, and other factors upon urban policy. Field projects.

Health, Physical Education, and Recreation

M130 Basic Instruction in Physical Education for Men (1 cr.)

Instruction in basic sports skills for male Junior Division students. Reasonable competence in individual and dual sports stressed; physical limitations considered; emphasis on carry-over value of recreational sports and need for continued physical fitness.

W100 Basic Instruction in Physical Education for Women (1 cr.)

Activities in the Department of Physical Education for Women are elective. The following activities are offered on a semester basis: apparatus and tumbling, modern dance, and swimming (including synchronized, Red Cross Life Saving, and Instructor's). The following activities are offered on a seasonal basis: archery, badminton, bait and fly casting, ballet, basketball, body dynamics, conditioning exercises, diving, exercise to music, fencing, folk dancing, golf, hockey, judo, lacrosse, recreational games, riflery, social dance, softball, square dance, swimming, tennis, track and field, volleyball, and water polo.

H160 First Aid (2 cr.)

Lecture and demonstration on first-aid measures for wounds, hemorrhage, burns, exposure, sprains, dislocations, fractures, unconscious conditions, suffocation, drowning, and poisons, with skill training in all procedures.

R180 Recreation Leadership (2 cr.)

History, theory, and philosophy of recreation. Significance of recreation in age of leisure and evolution of recreation movement. Practical leadership techniques for low-organized recreation activities, especially helpful in elementary education.

R273 Arts and Crafts (2 cr.)

Principles and techniques of arts and crafts for school, hospital, youth agency, recreation center, playgrounds, and other areas.

History**H101-H102 European-American World since 1500 I-II (3-3 cr.)**

Expansion of Western civilizations from Europe to North America; principal developments in Atlantic community as a whole, emphasizing common problems and forces as well as diversities.

H103-H104 History of Western European Civilization I-II (3-3 cr.)

Rise and fall of ancient civilizations; barbarian invasions; rise, flowering, and disruption of medieval Church; feudalism; national monarchies; rise of middle class; parliamentary institutions, liberalism, political democracy; industrial revolution, capitalism and socialist movements; nationalism, imperialism, international rivalries, wars.

H105-H106 American History: General Course I-II (3-3 cr.)

I. Colonial period, Revolution, Confederation and Constitution, National period to 1865. II. 1865 to present. Political history forms framework, and economic, social, cultural, and intellectual history interwoven. Introduction to historical literature, source material, and criticism.

Home Economics**H100 Textiles and Clothing Selection (3 cr.)**

Application of art principles, fashion, and knowledge of fabrics in selecting, buying, and selling clothing. Natural and manmade fibers, yarns, fabric construction, finishes, essential properties of fabrics.

H107 Clothing Constitution (2 cr.)

Laboratory work in construction, with application of art principles and knowledge of textiles; selection, alteration, and use of commercial patterns.

H108 Personal Adjustments and Family Living (3 cr.)

Problems of personal adjustment in college and immediate adaptations to family life. Consideration of what might be done to improve personal adjustments in families of the future.

H114 Home Nursing (2 cr.)

Prevention and spread of diseases in the home; care of the sick; treatment of home emergencies insofar as possible without special nurses' training.

H116 Food Preparation and Meal Service (3 cr.)

Scientific principles of food preparation and their application; problems in food selection, buying, menu planning, and table service.

H118 Art in Everyday Life (3 cr.)

Design principles basic to an appreciation of beauty in line, form, color, and texture; application to practical problems of the individual and his home.

H215 Weaving and Handcrafts (3 cr.)

Cultural, practical, and therapeutic values of handweaving; methods in production of handwoven textiles; techniques and materials for handcrafts.

Italian**M101-M102 Elementary Italian I-II (5-5 cr.)****Linguistics****L103 Introduction to the Study of Language (3 cr.)**

Linguistics as a body of information; nature and function of language; relevance of linguistics to other disciplines, with reference to modern American English and principal European languages.

Mathematics**M115 Review of Algebra and Trigonometry (5 cr.)**

P: one year of high school algebra. Introduction to mathematical reasoning, algebra, and trigonometry. Not open to those who have had M117. Credit may not be applied toward degrees in the College of Arts and Sciences but may be counted toward degrees in the Division of Allied Health Sciences.

M117 Partial Review of Algebra and Trigonometry (3 cr.)

P: one and one-half years of high school algebra. Introduction to mathematical reasoning, algebra, and trigonometry. Not open to those who have had M115. Credit may not be applied toward degrees in the College of Arts and Sciences but may be counted toward degrees in the Division of Allied Health Sciences.

M118 Finite Mathematics (3 cr.)

P: two years of high school algebra or M115 or M117. Set theory, linear systems, matrices and determinants, probability, linear programming. Applications to problems from the social sciences. Recommended for those in health sciences.

M119 Brief Survey of Calculus (3 cr.)

P: two years of high school algebra and trigonometry or M115 or M117. Introduction to calculus. Primarily for students in the social sciences. Not open to those who have had M211 or M215.

M131 Plane Analytic Geometry (2 cr.)

P: two years of high school algebra and trigonometry or M115 or M117. Coordinate systems, loci, equations of curves, straight line, circle, conic sections, general equation of second degree. Not open to those who have had M215. A student cannot receive credit for both M131 and M215.

M211 Calculus (3 cr.)

P: knowledge of plane analytic geometry, including ellipse, hyperbola, and parabola. Differentiation and integration of functions of one variable and applications. This course, together with adequate knowledge of analytic geometry, is equivalent to M215. Not open to those who have had M119 or M215.

M215-M216 Analytic Geometry and Calculus I-II (5-5 cr.)

P: two years of high school algebra and trigonometry or M115 or M117. Coordinates, functions, straight line, limits, continuity, derivative and definite integral, applications, circles, conics, techniques of integration, infinite series. M215 not open to those who have had M119 or M211. A student cannot receive credit for both M131 and M215.

M266-M267 Ideas of Statistics I-II (3-3 cr.)

P: two years of high school algebra or equivalent. Does not count toward major or teaching certificate in mathematics. Introduction to laws of probability on finite spaces, selected statistical techniques and their significance, and relevant computational procedures; basic theorems verified empirically.

Microbiology

M250 Introductory Microbiology: Lectures (3 cr.)

P: Biology B105-B106 or equivalent, Chemistry C105 or C101-C102. Introduction to microorganisms; cytology, nutrition and cultivation, physiology. Importance of microorganisms in applied fields; role of bacteria and viruses in infectious diseases.

M255 Introductory Microbiology: Laboratory (2 cr.)

P: M250, which should be taken concurrently. Exercises and demonstrations to yield proficiency in principles and techniques in the cultivation and utilization of microorganisms under aseptic conditions.

M350 Pathogenic Microbiology and Immunology: Lectures (3 cr.)

P: M250-M255 or equivalent. Principles of host-parasite interactions; isolation and identification of pathogenic bacteria, fungi, animal viruses, protozoa, and metazoa; immunology as applied to diagnostic, prophylactic, and therapeutic areas; chemotherapy and epidemiology of infectious diseases. Offered fall semester only.

M355 Pathogenic Microbiology and Immunology: Laboratory (2 cr.)

P: M350, which may be taken concurrently. Exercises, demonstrations, and a research problem to accompany and illustrate material discussed in M350.

Music

M174 Appreciation of Music I (3 cr.)

How to listen to music; art of music and its materials; instruments and musical forms.

M175 Appreciation of Music II (3 cr.)

Music of the 19th and 20th centuries. More intensive coverage than M174.

M201-M202 Literature of Music I-II (3-3 cr.)

From classical antiquity to the present. Designed to develop a perspective of the evolution of music in its social-cultural milieu, a repertoire of representative compositions, and a technique for listening analytically and critically. Nonmusic majors may enroll with consent of instructor.

X050 University Orchestra (2 cr.)**X060 University Bands: Concert Units—Two Symphonic Wind Ensembles, Concert Band, and Varsity Band; Marching Unit—Marching Hundred (2 cr.)****X070 University Choral Ensembles (2 cr.)**

Philosophy

P100 Introduction to Philosophy (3 cr.)

Open only to students without previous credit in philosophy. Historical introduction to problems of philosophy. Classical texts from ancient Greek and from modern philosophy to include works by Plato and Descartes and at least one 20th-century work.

P240 Ethics (3 cr.)

Some ancient, medieval, or modern philosophers' answers to ethical problems (e.g., nature of good and evil, relation of duty to self-interest, and objectivity of moral judgment).

P250 Logic (3 cr.)

P: 3 hours of philosophy or sophomore standing. Basic intellectual tools employed in processes of human knowing. Point of departure is traditional Aristotelian logic. Relevance of elementary logical forms of thought to scientific and philosophical knowledge in general is shown.

Physics

***P100 Physics in the Modern World (5 cr.)**

Ideas, language, methods, impact, and cultural aspects of physics today. Four lectures and one two-hour laboratory period each week. Includes classical physics up to physical bases of radar, atomic-energy applications, etc. Beginning high school algebra used. Cannot be substituted for physics courses explicitly designated in specified curricula.

P201 General Physics: Mechanics, Heat, and Sound (5 cr.)

P: Mathematics M117 or high school equivalent. Two lectures, two recitations, and one double laboratory period each week.

P202 General Physics: Light, Electricity, and Magnetism (5 cr.)

P: P201. Two lectures, two recitations, and one double laboratory period each week.

Psychology

P101 Introductory Psychology I (3 cr.)

Introduction to psychology; its methods, data, and theoretical interpretation in areas of learning, sensory psychology, and psychophysiology.

P102 Introductory Psychology II (3 cr.)

P: P101. Continuation of P101. Individual differences; personality; developmental, abnormal, and social psychology.

P105 General Psychology (5 cr.)

Open to special students upon invitation. Intensive introduction to psychology, combining aims and contents of P101, P102, and P111.

P111 Introductory Laboratory Psychology I (2 cr.)

P: P101. Experimental laboratory course supplementary to P101 to satisfy 5-hour science requirement. Experimental method and statistical treatment of data; laboratory investigation of selected topics in general psychology.

P112 Introductory Laboratory Psychology II (2 cr.)

P: grade of C or higher in P101 and P111. May be used in partial fulfillment of 10-hour science requirement. Continuation of laboratory practice in methods and fields of general psychology.

P234 Mental Hygiene (3 cr.)

P: 3 hours of psychology. Development and maintenance of mental health by application of psychological and psychiatric principles of normal human behavior. Credit not applicable toward concentration group.

P324 Abnormal Psychology (3 cr.)

P: 5 hours of psychology. A first course in abnormal psychology, with emphasis on forms of abnormal behavior, etiology, development, interpretation, and final manifestations.

Religion

R152 Introduction to Religions of the West (3 cr.)

Origins, development, institutions, beliefs, and current status.

R153 Introduction to Religions: Far East and India (3 cr.)

Origins, development, institutions, beliefs, and current status.

R160 Introduction to Religion in Culture (3 cr.)

Traditional patterns of encounter with the sacred. Secularization of Western culture. Religious elements in contemporary American culture.

R210 Old Testament Times (3 cr.)

Cultures of ancient Palestine and neighboring lands. Roots of religious, social, and political beliefs and practices now associated with Judaism, Christianity, and Islam. Old Testament one of sources used.

R220 The Christian Church in New Testament Times (3 cr.)

Origins of the Christian movement and development of its beliefs, practices, and institutions in the 1st century. Primary source is the New Testament, with due attention to non-Christian sources from the same environment.

Sociology

S161 Principles of Sociology (3 cr.)

Nature of interpersonal relationships, societies, groups, communities, and institutional areas such as the family, industry, and religion; social process operating within these areas; significance for problems of personality, human nature, social disorganization, and social change.

S163 Social Problems (3 cr.)

P: S161. Major social problems in areas such as the family, religion, economic order; crime, mental disorders, civil rights; racial, ethnic, and international tensions. Relation to structure and values of larger society.

S232 Society and the Individual (3 cr.)

P: S161. Personality and its development; relationship to culture and communication and to social settings; deviant types.

S309 The Community (3 cr.)

P: 6 hours of sociology, or S161 and junior standing. Urban, suburban, and rural communities, especially in America; community and neighborhood structure and organization; housing and land utilization; human behavior; patterns of community growth; community planning.

Spanish

S101-S102 Elementary Spanish I-II (5-5 cr.)

Intensive introduction to present-day Spanish, with drills for mastery of phonology, basic structural patterns, and functional vocabulary. Attendance in Language Laboratory required.

S103 Intermediate Spanish (5 cr.)

For students from secondary school placed into the second semester of first-year study. Credit is not allowed for both S102 and S103.

S203-S204 Second-Year Spanish I-II (4-4 cr.)

P: S102 or equivalent. Meets five times a week. I. Intensive drill reviewing important structural and vocabulary problems, coordinated with literary readings. Attendance in Language Laboratory required. II. Discussion in Spanish of contemporary Hispanic literature. Practice in composition both semesters. Sequence substitutes for S201, S211-S212.

Speech and Theatre

General

S121 Public Speaking (2 cr.)

Theory and practice of public speaking: training in thought processes necessary to organize speech content; analysis of components of effective delivery and language.

S143 Fundamentals of Oral Interpretation (2 cr.)

Basic principles and practice: analysis and reading of selections from prose, poetry, and drama.

S200 Training the Speaking Voice (1 cr.)

Exercises for production of good speaking voice and adequate speech sounds.

Rhetoric and Public Address

S221 Social Influence of Speech I (3 cr.)

Development of speech and theories of oral discourse; the communication process and human behavior and culture; speech in conflict situations.

S222 Social Influence of Speech II (3 cr.)

Influence of public address, historical and current problems of freedom of speech, ethics, propaganda, and demagogery.

S223 Business and Professional Speaking (3 cr.)

P: S121 or consent of instructor. Preparation and presentation of types of speeches and oral reports appropriate to business and professional occupations; group discussion and parliamentary procedure.

S224 Parliamentary Procedure (1 cr.)

Modern concepts of parliamentary forms in legislative assemblies and business meetings; practice in use of parliamentary procedure. Not open to students with credit in S223.

Speech Pathology and Audiology

S160 Speech Correction for Classroom Teaching (3 cr.)

Classification and methods of therapy for speech and hearing disorders; emphasis on rehabilitation that can be given by teacher to children in classroom situations.

S229 Discussion and Group Methods (3 cr.)

P: S121, or S130, or consent of instructor. Leadership and participation in group, committee, conference, and public discussion; logical and psychological aspects of group process.

S240 Appreciation of the Theatre (2 cr.)

Aspects of theatre chosen to increase understanding and appreciation of this art form.

S247-S248 Introduction to History of the Theatre I-II (3-3 cr.)

Significant factors in primary periods of theatre history and their effect on contemporary theatre. Review of representative plays of each period to illustrate theatrical use of dramatic literature.

Zoology

Z103 Animal Biology (5 cr.)

Not open to students with credit in Biology B100. Emphasis on interdependence of all living things. Type forms, e.g., frog, crayfish, earthworm, used to demonstrate general biological principles. Functional aspects of biology, inheritance, development, and evolution and their application to human biology.

Z215 Developmental Anatomy (5 cr.)

P: Z103 with grade of C or higher. Comparative study of the structure and development of vertebrates, including man.

Z364 Genetics (4 cr.)

P: Z103, Botany B101, or equivalent. Not open to freshmen. Principles of heredity. The gene: its operation, mutation, and behavior in populations.

Faculty and Staff, 1968-69

Certification Abbreviations

- A.R.I.T.—American Registry of Inhalation Therapists; approved by the American Society of Anesthesiology and the American College of Chest Physicians
- C.R.L.—Certified Record Librarian; approved by the American Association of Medical Record Librarians
- C.T. (ASCP)—Cytotechnologist; approved by the American Medical Association and the American Society of Clinical Pathologists
- H.T. (ASCP)—Histological Technician; approved by the American Medical Association and the American Society of Clinical Pathologists
- M.T. (ASCP)—Medical Technologist; approved by the American Medical Association and the American Society of Clinical Pathologists
- M.T. (ASCP) BB—Blood Banking Technologist; approved by the American Medical Association and the American Society of Clinical Pathologists
- N.M.T. (ASCP)—Nuclear Medical Technologist; approved by the American Medical Association and the American Society of Clinical Pathologists
- O.T.R.—Registered Occupational Therapist; approved by the American Medical Association and the American Occupational Therapy Association
- R.D.H.—Registered Dental Hygienist; approved by the American Dental Association
- R.P.S.—Registered Professional Sanitarian
- R.P.T.—Registered Physical Therapist; approved by the American Medical Association and the American Physical Therapy Association
- R.R.L.—Registered Medical Record Librarian; approved by the American Medical Association and the American Association of Medical Record Librarians
- R.T.—Registered Radiologic Technologist; approved by the American Medical Association and the American Registry of Radiologic Technologists
- H.E.I.F.S.S.—Hospital Education Institution Food Service Society

PROGRAM DIRECTORS

- LYNN ARBOGAST, M.D., Director of the Division of Allied Health Sciences
- HAROLD S. ADAMS, B.S., Director of Public Health-Environmental Health
- MRS. FRANCES C. EKSTAM, M.S., Director of Physical Therapy
- A. REBEKAH FISK, M.S., Director of Public Health Dental Hygiene
- CHARLES H. HELMEN, M.D., Director of Radiologic Technology
- SAMUEL H. HOPPER, Ph.D., Director of Public Health Administration and Education
- JESSE HUBBARD, M.D., Director of Cytotechnology
- MARY A. LACY, R.R.L., Director of Medical Records
- ALVIN M. LoSasso, M.D., Director of Inhalation Therapy
- DEAN LUSTED, M.D., Director of Medical Technology
- CAROL NATHAN, A.M., Director of Occupational Therapy
- ARLENE M. WILSON, M.S., Director of Hospital Dietary Technology

FACULTY AND STAFF—MEDICAL CENTER

- ABEL, MRS. EVELYN J., B.S. (University of Minnesota, 1953), Assistant Professor of Dietetics
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- ADAMS, HAROLD S., B.S. (Massachusetts State College, 1929), R.P.S. (State of Indiana), Director of the Public Health-Environmental Health Program, and Associate Professor of Public Health
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- BATCHELOR, MRS. SUZANNE, B.S. (Indiana University, 1965), (M.T. (ASCP), 1965), Lecturer in Medical Technology
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- BEHNKE, ROY H., M.D. (Indiana University, 1946), Professor of Medicine
- BETTIS, EUGENE W., JR., Teaching Associate in Radiologic Technology
- BLAND, HESTER B., H.S.D. (Indiana University, 1956), Lecturer in Public Health Education (Northwest)
- BONSETT, CHARLES A., M.D. (Indiana University, 1952), Associate in Neurology
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- BRADLEY, T. KAY, B.S. (Indiana University, 1967), (O.T.R., 1967), Instructor in Occupational Therapy
- BRASHEAR, R. E., M.D. (Ohio State University, 1958), Assistant Professor of Medicine
- BRITTAIN, HARRY M., Instructor in Psychiatry
- CAMPBELL, J. A., M.D. (University of Cincinnati, 1938), Consulting Radiologist in the Student Health Service; Chairman, and Professor of Radiology
- CARR, JACK D., D.D.S. (Indiana University, 1939), M.S. (Butler University, 1957), Assistant Professor of Radiology
- CHAMPION, LEAMON B., JR., Teaching Associate in Radiologic Technology
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- CONINE, MRS. TALI A., H.S.D. (Indiana University, 1968), (R.P.T., 1956), Associate Professor of Physical Therapy
- DALY, WALTER J., M.D. (Indiana University, 1955), Associate Professor of Medicine
- DARRELL, ALAN M., A.B. (University of Maine, 1950), (C.L.U., 1965), Lecturer in Health Insurance
- DRITSAS, EUGENIA, Ph.G. (Massachusetts College of Pharmacy, 1924), (M.T. (ASCP), 1931), Instructor in Serology
- DUNCAN, DARRAL D., Teaching Associate in Radiologic Technology
- EKSTAM, MRS. FRANCES C., M.S. (Indiana University, 1960), (R.P.T., 1944), Director of the Physical Therapy Program, and Associate Professor of Physical Therapy
- FASSNACHT, GEORGE G., M.C.E. (New York University, 1940), Lecturer in Public Health
- FEELEY, MRS. MARY, B.S. (Butler University, 1945), (M.T. (ASCP), 1946), Instructor in Medical Technology
- FISHER, FRANK E., B.S.E.E. (Purdue University, 1930), Lecturer in Public Health
- FISK, A. REBEKAH, M.S. (Butler University, 1958), (R.D.H., 1923), Director of the Public Health Dental Hygiene Program, and Assistant Professor in Clinic (School of Dentistry)
- FOLEY, PATRICIA, Lecturer in Radiologic Technology
- FRANKEN, EDMUND A., JR., M.D. (University of Oklahoma, 1961), Assistant Professor of Radiology
- GALLAGHER, ELIZABETH, A.B. (Butler University, 1959), (O.T.R., 1938), Instructor in Occupational Therapy, and Supervisor of Occupational Therapy Unit, Long Hospital
- GILLIAM, ARNOLD J., Teaching Associate in Radiologic Technology
- GISH, CHARLES W., D.D.S. (Indiana University, 1949), M.S.D. (1960), Co-Chairman of the Department of Community Dentistry; Assistant Professor of Pedodontics, and Consultant in Public Health Dentistry (School of Dentistry)
- GLOVER, JOHN L., M.D. (Vanderbilt University, 1958), Assistant Professor of Surgery
- GRIFFIN, NANCY L., B.S. in O.T. (Texas Woman's University, 1958), (O.T.R., 1958), Instructor in Occupational Therapy
- GRIMWOOD, KAY, R.T. (Indiana University, 1966), Lecturer in Radiologic Technology
- HAGAR, MRS. MARY C., R.N. (Miami Valley Hospital, Dayton, Ohio, 1929), (R.P.T., 1946), Lecturer in Physical Therapy, and Supervisor of the Physical Therapy Unit, Long Hospital
- HALL, WILLIAM S., B.S. (University of Pennsylvania, 1933), J.D. (Indiana University, 1951), Lecturer in Medical Jurisprudence

- HAMILTON, MRS. CONSTANCE R., B.S. (Indiana University, 1964), (R.D.H., 1963), Instructor in Dental Hygiene (School of Dentistry)
- HARLOW, JO ANN, R.T. (Indiana University, 1965), Lecturer in Radiologic Technology
- HAYMOND, MRS. MARY M., B.S. (College of St. Scholastica, 1940), (R.R.L., 1942), Consultant, and Instructor (part-time) in the Medical Records Program
- HEFNER, MRS. MARCEA, B.S. (Indiana University, 1966), Clinical Instructor in the Medical Records Program
- HELMEN, CHARLES H., M.D. (Indiana University, 1953), Director of Radiologic Technology, and Associate Professor of Radiology
- HERT, ORAL H., B.S. (Purdue University, 1948), Lecturer in Public Health
- HINDERLITER, FRANCIS H., Teaching Associate in Radiologic Technology
- HINE, MAYNARD K., D.D.S. (University of Illinois, 1930), M.S. (1932), Chancellor of Indiana University at Indianapolis; Professor of Periodontics (School of Dentistry)
- HOCKER, NARCISSA, M.S. (Indiana University, 1964), (M.T. (ASCP) BB, 1945), Instructor in Immunohematology
- HOPPER, SAMUEL H., Ph.D. (Massachusetts Institute of Technology, 1937), Chairman of the Executive Committee of the Department of Preventive Medicine; Director of Public Health Administration and Education, and Professor of Public Health
- HORNBACK, NED B., M.D. (University of Wisconsin, 1956), Assistant Professor of Radiology
- HUBBARD, JESSE D., M.D. (Johns Hopkins University, 1951), Director of Cytotechnology, and Professor of Pathology
- HUSS, JOY, A.B. (Whittier College, 1953), (O.T.R., 1958), (R.P.T., 1962), Curriculum Coordinator for the Occupational Therapy Program, and Instructor in Occupational Therapy
- IRWIN, LOUISE, M.S. (Purdue University, 1950), Director, and Associate Professor of Dietetics
- ISAACS, DIANNA, R.T. (Indiana University, 1967), Assistant Director, and Teaching Associate in Radiologic Technology
- JAMISON, THOMAS L., Teaching Associate in Radiologic Technology
- JOHNSTON, JOHN F., D.D.S. (Indiana University, 1921), M.S.D. (1964), University Professor of Dentistry (School of Dentistry)
- JONES, ELIZABETH A., M.S. (Indiana University, 1949), M.P.H. (University of Michigan, 1965), Lecturer in Public Health
- JUMP, ROBERT L., B.P.S. (Purdue University, 1955), Lecturer in Public Health
- JUNG, DAVID, Ph.D. (Indiana University, 1935), Instructor in Clinical Chemistry
- KEHREIN, SUETTA (R.T., 1964), Associate Director, and Teaching Associate in Radiologic Technology
- KEPPLER, JOHN F., B.S. (Purdue University, 1938), Lecturer in Public Health
- KIDDER, JOHN L., Teaching Associate in Radiologic Technology
- KLINE, JOAN L., B.S.P.H. (Indiana University, 1967), (R.D.H., 1954), Instructor in Dental Hygiene (School of Dentistry)
- KOEHNKE, ANITA, B.S. (Washington University, 1956), (R.P.T., 1948), Lecturer in Physical Therapy, and Supervisor of the Physical Therapy Unit, Riley Hospital
- LACY, MARY ANN, A.B. (College of St. Scholastica, 1954), (R.R.L., 1954), Director, and Assistant Professor in the Medical Records Program
- LADUE, RUTH, A.M. (Stanford University, 1966), (R.P.T., 1945), Instructor in Physical Therapy
- LEE, WIE-SHING, Ph.D. (Indiana University, 1966), Instructor in Pathology
- LEHMAN, RACHEL M., B.S. (Indiana State University, 1929), (M.T. (ASCP), 1936), Instructor in Medical Technology
- LEININGER, VERNON E., Ph.D. (Purdue University, 1968), Assistant Professor of Radiology
- LIFSEY, LINDA, B.S. (University of Tennessee, 1965), Instructor in Dietetics
- LOEHR, WILLIAM M., M.D. (University of Louisville, 1935), Professor of Radiology
- LoSASSO, ALVIN M., M.D. (Ohio State University, 1963), Director of the Inhalation Therapy Program, and Assistant Professor of Anesthesiology
- LUSTED, DEAN, M.D. (University of Iowa, 1955), Director of the Medical Technology Program, and Assistant Professor of Pathology
- MCCOWEN, MAX C., M.S. (Indiana State University, 1938), Lecturer in Public Health

- McCURN, JOHNNIE L., Teaching Associate in Radiologic Technology
- McDONALD, RALPH E., D.D.S. (Indiana University, 1944), M.S. (1951), Acting Dean of the School of Dentistry; Chairman, and Professor of Pedodontics (School of Dentistry)
- McLEES, MRS. JOAN, B.S. (MacMurray College, 1950), Assistant Professor of Dietetics
- McLELLAND, MALCOLM J., M.S. (Indiana University, 1941), Lecturer in Public Health
- MANION, MARLOW W., M.D. (Indiana University, 1926), Professor of Otolaryngology
- MATLOCK, JAMES F., D.D.S. (Indiana University, 1943), M.S.D. (1962), Assistant Professor of Radiology (School of Dentistry)
- MATTHEWS, WILLIAM M., M.D. (Indiana University, 1946), Associate Professor of Anesthesiology
- MILLER, JERRY, M.D. (Temple University, 1947), Professor of Anesthesiology
- MILLER, M. DEVON, M.S. (Indiana University, 1966), Instructor in Medical Records
- MILLER, R. E., M.D. (Indiana University, 1951), Professor of Radiology
- MINTON, SHERMAN A., JR., M.D. (Indiana University, 1942), Professor of Microbiology
- MISHKIN, FREDERICK S., M.D. (University of Chicago, 1962), Assistant Professor of Radiology
- MOORE, DONALD C., M.D. (Indiana University, 1962), Lecturer in Radiologic Technology
- NATHAN, CAROL, A.M. (University of Southern California, 1968), (O.T.R., 1958), Director of the Occupational Therapy Program, and Assistant Professor of Occupational Therapy
- Ng, ANASTACIO, M.D. (University of Santo Tomas, Philippines, 1958), Assistant Professor of Radiology
- NIE, DIEDRE, A.B. (Connecticut College for Women, 1966), (O.T.R., 1968), Instructor in Occupational Therapy
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- NORMAN, RICHARD D., D.D.S. (Indiana University, 1958), M.S.D. (1964), Assistant Professor of Dental Materials (School of Dentistry)
- OFFUTT, ANDREW C., M.D. (Indiana University, 1940), L.L.D. (Franklin College, 1957), Assistant Professor of Public Health
- PAREKH, AMRITLAL C., Ph.D. (University of Minnesota, 1960), M.D. (1965), Assistant Professor of Pathology
- PHILLIPS, RALPH W., M.S. (Indiana University, 1955), Research Professor of Dental Materials
- PING, RONALD S., D.D.S. (Indiana University, 1941), Chairman, and Associate Professor of Oral Surgery (School of Dentistry)
- POLIARD, MRS. CAROLINE S., B.S. (University of New Hampshire, 1952), (O.T.R., 1952), Instructor in Occupational Therapy
- RAIDT, HAROLD, M.S. (University of Kentucky, 1934), Professor of Microbiology (School of Medicine, School of Dentistry, Graduate School)
- RAMSDEN, MRS. ELSA L., Ed.D. (Boston University, 1962), (R.P.T., 1957), Assistant Professor of Physical Therapy
- REESE, ISAAC C., M.S. (University of Rochester, 1961), Assistant Professor of Radiology (Nuclear Medicine)
- RIDLEY, ELTON, M.B.A. (University of Chicago, 1952), Director of Hospitals, and Associate Professor of Hospital Administration
- RIEKENA, JOHN, B.S. (University of Puget Sound, 1961), (O.T.R., 1961), Lecturer in Occupational Therapy, and Director of Prevocational Evaluation, Crossroads Rehabilitation Center, Indianapolis
- ROESCH, RYLAND P., M.D. (Indiana University, 1948), Associate Professor of Anesthesiology
- ROSS, EDWARD, M.D. (Indiana University, 1963), Research Fellow in Cardiology
- ROSS, JOSEPH C., M.D. (Vanderbilt University, 1954), Professor of Medicine
- SANGHVI, AJID, Ph.D. (University of Minnesota, 1966), Assistant Professor of Pathology
- SCHULTHEIS, RICHARD L., M.D. (Indiana University, 1960), J.D. Lecturer in the Medical Records Program
- SEYMOUR, MARGARET, Dipl. in O.T. (University of Toronto, Canada, 1947), (O.T.R., 1968), Instructor in Occupational Therapy

- SHAFFER, WILLIAM G., D.D.S. (Ohio State University, 1947), M.S. (University of Rochester, 1949), Chairman, and Professor of Oral Pathology (School of Dentistry, Graduate School); Professor of Oral Pathology (General Pathology) (School of Medicine)
- SHANKS, JAMES C., JR., Ph.D. (Northwestern University, 1957), Clinical Director of Speech Pathology Services, and Professor of Speech Pathology (Otorhinolaryngology and Bronchesophagology)
- SHEA, DANIEL, R.T. (Indiana University, 1965), Lecturer in Radiologic Technology
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- SMITH, CHARLES E., D.D.S. (Indiana University, 1961), M.P.H. (University of Michigan, 1965), Instructor in Pedodontics and in Preventive Dentistry (School of Dentistry)
- SMITH, DONALD E., M.B.A. (University of Chicago, 1963), Associate Director of Hospitals, and Instructor in Hospital Administration
- SMITH, ROGER A., B.S. (Indiana State University, 1961), (C.T. (ASCP), 1964), Instructor in Cytotechnology
- SNIDER, RICHARD T., Ph.D. (University of Houston, 1966), Assistant Professor of Clinical Psychology (Psychiatry)
- SOLOW, ELIZABETH B., M.S. (Indiana University, 1962), Instructor in the Division of Neurological Surgery (Surgery)
- SPOLYAR, LOUIS W., M.D. (Indiana University, 1936), Assistant Professor of Public Health
- STANDISH, SAMUEL M., D.D.S. (Indiana University, 1945), Chairman, Division of Clinical Oral Pathology, and Professor of Oral Pathology (School of Dentistry, Graduate School)
- STARKEY, PAUL E., D.D.S. (Indiana University, 1943), Chairman, Division of Clinical Pedodontics, and Professor of Pedodontics (School of Dentistry)
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- SUMMERS, WILLIAM A., Ph.D. (Tulane University of Louisiana, 1940), Professor of Microbiology (School of Medicine, School of Dentistry, Graduate School)
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- TREECE, WILLIAM, Teaching Associate in Radiologic Technology
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- VAN NESS, ADA M., M.S. (Ohio State University, 1963), Assistant Professor of Dietetics
- VINCENT, MRS. JUDITH ANN, Teaching Associate in Radiologic Technology
- WEBSTER, RICHARD C., Ph.D. (University of Kansas, 1949), Associate Professor of Anatomy (School of Medicine, School of Dentistry, Graduate School)
- WHITTEN, J. B., JR., D.D.S. (University of Missouri at Kansas City, 1962), M.S.D. (Indiana University, 1966), Assistant Professor of Oral Pathology (School of Dentistry)
- WILLIAMS, GERTRUDE E., Teaching Associate in Radiologic Technology
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- YENOWINE, BARBARA A., B.S. (Indiana University, 1965), (R.P.T., 1965), Instructor in Physical Therapy
- YOHO, ROBERT O., A.M. (Indiana University, 1939), H.S.D. (1957), Instructor in Public Health (School of Medicine, School of Dentistry)
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FACULTY AND STAFF—BEECH GROVE

- BUEHL, ISABELLE A., M.D. (Indiana University, 1959), Assistant Professor of Pathology
- CARRIER, DOROTHY ANN, B.S. (Lander College, 1963), (M.T. (ASCP), 1963), Lecturer in Medical Technology
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- CLARK, MRS. ELIZABETH ANN, (M.T. (ASCP), 1942), Lecturer in Medical Technology
- COSTIN, ROBERT L., M.D. (Indiana University, 1956), Director, and Assistant Professor in Pathology
- HIBBEN, MRS. KATHRYN L., (M.T. (ASCP), 1952), Lecturer in Medical Technology
- MACALLISTER, MRS. EVELYN M., B.S. (Indiana University, 1962), (M.T. (ASCP), 1962), Teaching Supervisor, and Instructor in Medical Technology
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- UTKE, MRS. EVELYN M., A.B. (University of North Carolina at Greensboro, 1943), (M.T. (ASCP), 1957), Lecturer in Medical Technology
- VANVLIET, MRS. LORRAINE K., B.S. (University of Michigan, 1966), (M.T. (ASCP), 1966), Lecturer in Medical Technology

FACULTY AND STAFF—FORT WAYNE

- ALDRED, ALLEN W., M.D. (Indiana University, 1953), Assistant Professor of Pathology, Lutheran Hospital
- AMSTUTZ, MRS. JOANN (M.T. (ASCP), 1959), Lecturer in Medical Technology, St. Joseph's Hospital
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- FOX, DAVID R., (M.T. (ASCP), 1961), Lecturer in Medical Technology, St. Joseph's Hospital
- FRANKHOUSER, CHARLES, M.D. (State University of New York, 1950), Assistant Professor of Pathology, Parkview Memorial Hospital
- GRIEST, WALTER D., M.D. (University of Cincinnati, 1944), Director, and Assistant Professor of Pathology, Lutheran Hospital
- MACHLAN, THERESA M., (M.T. (ASCP), 1952), Lecturer in Medical Technology, Lutheran Hospital
- O'SHAUGHNESSY, PHILLIP E., D.D.S. (Indiana University, 1960), Assistant Director of Dental Auxiliary
- PAN, CHARLES M., M.D. (National Taiwan University, China, 1953), Assistant Professor of Pathology, St. Joseph's Hospital
- ROMANOWSKI, LAWRENCE C., A.M. (Indiana University, 1962), Lecturer in Medical Technology, Parkview Memorial Hospital
- RUMSCHLAG, DONALD R., B.S. (St. Francis College, Indiana, 1962), (M.T. (ASCP), 1960), Teaching Supervisor, and Lecturer in Medical Technology, St. Joseph's Hospital
- SCHIMMELE, RALPH G., D.D.S. (Indiana University, 1952), Assistant Professor of Operative Dentistry, Consultant in Crown and Bridge and Partial Denture, and Director of the Dental Auxiliary Programs on the Regional Campuses
- SCHLADEMAN, KARL R., M.D. (Northwestern University, 1942), Director, and Assistant Professor of Pathology, Parkview Memorial Hospital
- SCHNEIDER, LOUIS, M.D., (New York University, 1940), Director, and Assistant Professor of Pathology, St. Joseph's Hospital
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FACULTY AND STAFF—GARY

- CABRERA, P. B., M.D. (University of Santo Tomas, Philippines, 1955), Associate Director, and Pathologist, St. Mary Mercy Hospital
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- DIELMAN, RAY, B.S. (Ohio Northern University, 1960), (ASRT), Consultant in Nuclear Medicine, St. Mary Mercy Hospital
- DUFF, OLIVE, (H.T. (ASCP), 1967), Lecturer in Medical Technology, St. Mary Mercy Hospital
- GRIMES, JEAN, (M.T. (ASCP), 1968), Lecturer in Medical Technology, St. Mary Mercy Hospital
- HOLOWATY, JEAN, B.S. (University of Heidelberg, 1948), (M.T. (ASCP), 1956), Teaching Supervisor, and Social Coordinator for Medical Technology, St. Mary Mercy Hospital
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- SWIERCZEWSKI, JOHN, M.S. (University of Connecticut, 1964), Instructor in Medical Technology, St. Mary Mercy Hospital
- WAIT, ROGER, B.S. (Manchester College, 1957), (M.T. (ASCP), 1960), Instructor in Medical Technology

FACULTY AND STAFF—SOUTH BEND

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