

# **JAMES SCHOLAR PROGRAM FOR INDEPENDENT STUDY**

**2017~2018**



***Class of 2020***



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# **JAMES SCHOLAR PROGRAM FOR INDEPENDENT STUDY, 2017-2018 CLASS OF 2020**

## **I. BACKGROUND INFORMATION**

The James Scholar Designation is given to students formally identified by their colleges as honor students. They are granted certain privileges to facilitate their education. Criteria for admission, retention, and graduation are established by the individual colleges. Designation by the University as a James Scholar recognizes students of extraordinary ability and achievement. It entitles students to certain academic privileges and charges them with the responsibility for seeking sustained intellectual achievement throughout their undergraduate medical program. In addition, they are encouraged to pursue individual scholarly interests through independent study and research projects.

The James Scholar Program for Independent Study within the College of Medicine was established in 1967. Admission criteria are left to the particular regional sites, but requirements for graduation are set by the College of Medicine. The James Scholar Program for Independent Study at the University of Illinois College Of Medicine at Peoria began in 1973.

## **II. PHILOSOPHY AND GOALS OF THE JAMES SCHOLAR PROGRAM**

### Philosophy of an Honors Program

The goal of an honors program is to match faculty with the best inquiring students to challenge each student to the limit of his/her capacity. Encouragement and opportunity are needed to assure that the brightest students will be challenged during their education.

### Philosophy of an Independent Study Program

Independent study allows freedom to tailor one's curriculum to special needs, goals, desires, or interests. It promotes the qualities of intellectual independence, self-motivation, and scholarship, and allows utilization of the widest range of possible resources. It fosters the development of special talents and abilities. One consequence may be the reduction of formal instruction with an increase in the time available for self-directed and self-reliant study that should characterize higher education. Independent study offers the opportunity for unusually creative, imaginative, and willing students to deviate from the standard path and pace of instruction; to develop a learning strategy that best suits the student's educational and research goals and interests. It is a special pathway to do things that ordinarily might not be possible within the regular curriculum. It does not mean absence of all parameters and guidelines, but rather provides a means of liberation from the limitations imposed by a structured curriculum and an increased opportunity for self-directed learning. It is not so much a program as a personal orientation to learning. It attracts and supports students who learn best when goals and methods are self-derived.

### Philosophy of Study-in-Depth

Study-in-depth allows the development of an important, meaningful, and significant proposal investigating some aspect of medicine. It facilitates a furthering of the body of knowledge and the development of intellectual curiosity, gaining new insights, and the ability to discriminate quality of prevailing research. It fosters scholarly study and investigation that can be accomplished during the undergraduate medical program. It may allow meaningful contributions to our understanding of disease or science and may well broaden the student's career opportunities. It ultimately enhances the quality of the performance of each scholar.

In summary, the James Scholar Program is an academic honors program for highly qualified students, which stresses independent study and requires a study-in-depth. It is not merely a special project or unusual clerkship experience, but rather an approach to one's entire undergraduate medical education. The goals of the James Scholar Program are to recognize outstanding medical students, to promote the qualities of intellectual independence, self-motivation, and scholarship in those students, and to enable the development of in-depth knowledge in some area of medicine.

### **III. POLICIES AND GUIDELINES**

#### Criteria for Admission

Since 1973, the regional sites have been given the responsibility for defining and describing the James Scholar Program for those particular sites (though some requirements for graduation are set by the college). The selection criteria used in Peoria are as follows:

1. Academic excellence. Application is limited to students in the upper one-third of the entering M-2 class.
2. Special talents and abilities.
3. A high level of maturity and self-motivation.
4. A desire to pursue an individual curriculum and intellectual objectives without the constraints of the regular curriculum.
5. An interest in pursuing problems in greater depth than is usually possible in conventional studies.
6. Acceptance of the criteria for graduation from the James Scholar Program.

Only up to 15 percent of any given class is permitted to participate in the James Scholar Program.

#### Application Procedure

Guidelines for students wishing to apply for the James Scholar Program are as follows:

1. Contact the chairman of the James Scholar Committee to discuss preliminary ideas, concerns, and questions. The Committee will recommend faculty who may be helpful to the student, and make suggestions regarding the application.
2. Identify a mentor and develop the James Scholar Proposal with that mentor. The mentor will also submit a letter of recommendation and commitment to be included in the proposal forward.
3. Submit a James Scholar Proposal that is consistent with the Outline beginning on Page 7.
4. The deadline for the completion of the application is established by the Committee in January of the M-2 year.

#### Committee Action Regarding Application

After evaluating the candidates James Scholar proposal the Committee may:

- (a) accept the candidate as a provisional James Scholar,
- (b) accept the candidate as a provisional James Scholar with revisions to the study-in-depth,
- (c) invite the candidate to resubmit with major revision to the study-in-depth
- (d) invite the candidate to submit a new study-in-depth on a different topic,
- (e) reject the study-in-depth without inviting the candidate to resubmit.

Final Committee action regarding provisional status will come no later than the end of the M-2 year.

## Final Acceptance

After provisional acceptance as a James Scholar, the student will have a period of time stated by the Committee for the purpose of developing a final protocol for the study-in-depth, and securing the final written approval from the James Scholar mentor and the chairman of the James Scholar Committee. In cases where further evaluation of the study-in-depth is needed, a consultative faculty opinion may be sought locally or elsewhere within the University of Illinois College of Medicine. Toward the end of the provisional period, the James Scholar mentor will submit a letter to the Committee indicating approval of the study-in-depth. On receipt of such advice and after evaluation of the study-in-depth protocol and M-2 academic performance, the Committee then will consider designating the scholar as a full James Scholar. Should the plans be judged inadequate, or should academic performance or professionalism standards ([http://peoria.medicine.uic.edu/UserFiles/Servers/Server\\_442934/File/Peoria/Departments%20and%20Programs/Academic%20Affairs/Students/ProfessionalismPolicyForm.pdf](http://peoria.medicine.uic.edu/UserFiles/Servers/Server_442934/File/Peoria/Departments%20and%20Programs/Academic%20Affairs/Students/ProfessionalismPolicyForm.pdf)) be marginal, the Committee may choose to not advance the provisional scholar to full status.

## Curriculum

Most James Scholars at Peoria take all of the courses that are required of other students. The James Scholar will have an academic advisor who may or may not be the project mentor. In addition, with the guidance of a mentor, they develop a research project or study-in-depth which is a scholarly project.

Once chosen into the program, the scholar should keep in close touch with the Office of Academic Affairs concerning the blocks of time spent on various segments of the curriculum and research. At least three times each year scholars are expected to present reports of progress to the James Scholar Committee.

## Role of the Mentor

The James Scholar mentor supervises and sponsors the study-in-depth. The mentor will also help plan the James Scholar Proposal or help secure appropriate co-mentors. Co-mentors may be needed for research or study-in-depth in the basic science areas, or adjunct mentors may be needed at another site removed from the Peoria campus. The mentor will also help the scholar prepare for the presentation of the study-in-depth and help secure support and recognition for the scholar and the project. The designation as a James Scholar mentor carries with it added faculty distinction and responsibility. Selecting excellent James Scholar mentors serves the purpose of matching the best faculty with the best inquiring students. Guidance of the James Scholar requires special talent for providing counsel without usurping the independence of the given scholar. The mentor should help the James Scholar plan the study-in-depth and should periodically review progress in the study-in-depth. A written assessment will be provided at least three times each year prior to the formal progress review meetings of the James Scholar Committee.

## Responsibilities of the Committee Chairman

The responsibilities of the Chairman of the James Scholar Committee are as follows:

1. To act as liaison on behalf of the program with students and individual faculty members.
2. Establish dates and agendas for James Scholar Committee meetings, including progress review meetings.
3. To report to the Committees on Instruction and Appraisal and the Executive Committee relative to the James Scholar Program.
4. To receive formal and informal reports on James Scholars and respond appropriately.
5. To submit documents relative to the James Scholar Program operation, policy, and philosophy to the James Scholar Committee for comment and approval.
6. To participate with the Office of Academic Affairs in orientation of prospective and new students with regard to independent study options on the campus.

7. The chairman may designate a Subcommittee on Project Evaluation to review carefully the study-in-depth and submit its evaluation as to the quality of the study-in-depth to the James Scholar Committee. The designated chairman of the Subcommittee on Project Evaluation may enlist the assistance of experts from the College of Medicine familiar with the subject matter of the study-in-depth to assist in judging its merits.

### James Scholar Committee

The Committee is composed of faculty members with a history of significant research accomplishment. The staff person is the office manager located in Academic Affairs. The Committee functions in both an advisory and administrative capacity. It is the judge of those who are admitted, retained and/or graduated as James Scholars, and has formulated an evaluation protocol used in recommending scholars for retention, and/or graduation. The James Scholar Committee performs its functions through a series of meetings distributed throughout the academic year, including meetings to select new James Scholars, progress review meetings, and meetings to review scholars for retention and/or graduation.

### Evaluation Protocol

James Scholars will be evaluated according to the following guidelines:

- I. Objective Evaluations
  - A. The Independent Study Program student shall be required to pass Step 1 and Step 2 of the USMLE.
  - B. Scholars' course and clerkship performances are expected to be in the upper one-third of their class.
- II. Subjective Evaluations
  - A. The James Scholar student shall, at the end of a significant association with his/her mentor, receive a research performance evaluation.
  - B. Should problems arise, the first line of communication must be between the scholar and his/her mentor.
  - C. Scholars are expected to adhere to high professionalism standards of the College of Medicine. Lack of adherence to professionalism standards could result in dismissal from the program.
- III. Study-in-Depth
  - A. The James Scholar shall be required to show special competence/interest in an area of his/her choosing by the completion of the study-in-depth. The study-in-depth is defined as scholarly activity in a healthcare related subject which may be an observational or experimental design and is valid for interpretation of the question, utilizing appropriate controls and methodology. It may involve clinical, instructional, or research aspects and run the gamut of subjects (i.e., basic science, clinical application, medical ethics, forensic medicine, public health, medical education, medical literature, etc.). It must result in a document (paper, computer program, film, video, photographs, etc.).
  - B. The research is concluded with an abstract or a paper presented at symposia or specialty meetings, accepted for publication in a peer-reviewed journal, or approved by a panel of faculty experts.
  - C. The scholar may not make major changes in the area of the study-in-depth nor collaborate with another student toward completion of the study-in-depth without prior approval from the James Scholar Committee.

- D. Successful fulfillment of the study-in-depth requirement and recommendation of the scholar for graduation as a James Scholar will be made by a decision of the full Committee at the Spring meeting prior to graduation.

IV. Assurance of Due Process

- A. In the event that a conflict cannot be worked out between the student and the mentor, or in the event of some other extraordinary circumstance, the Committee as a whole shall exercise due process to resolve the problem.
- B. To assemble a Committee under this clause, the mentor and the chairman must agree that this is the action to be taken.

V. Retention Requirements

Requirements for retention as a James Scholar are as follows:

- A. For continuation beyond the M-2 year, scholars must perform satisfactorily in all segments of their M-2 curriculum and have their study-in-depth fully approved.
- B. For continuation beyond the third year, the scholar must perform satisfactorily in all segments of their M-3 curriculum and shall have the study-in-depth well underway.
- C. Two weeks prior to the Spring James Scholar Committee meeting in the M-4 year, the scholar shall have completed the study-in-depth and presented the results as defined under the evaluation protocol.

If the James Scholar fails to attain the requirements for continuation in the program, he or she may be placed on probationary status and given a period of time to correct specific deficiencies. If these deficiencies are not corrected, the student may then be removed from the James Scholar Program, losing the prerogatives enjoyed by such students.

VI. Promotion

- A. At the Spring meeting of the Committee on Student Promotions of the UICOM-P, the designated representative of the James Scholar Program shall submit a list of scholars in good standing.
- B. All scholars are to be considered in good standing unless an action has been taken under the Retention Requirements (Section V).

VII. Review of Evaluations

Objective evaluations, subjective evaluations, and progress in the study-in-depth will be reviewed at least three times yearly at progress review meetings of the James Scholar Committee. This will include a report from the scholar and mentor. Requirements for retention in the James Scholar Program, as well as requirements for graduation, are outlined below.

Requirements for Graduation as a James Scholar

For certification as a James Scholar upon graduation, the scholar must have fulfilled the following requirements:

1. Maintain satisfactory performance in the scholar's independent study curricular segments.
2. Pass Step 1 and Step 2 Clinical Skills and Clinical Knowledge of the USMLE.
3. Complete and submit an acceptable study-in-depth as defined under Evaluation Protocol.
4. Complete required M-2, M-3, and M-4 curriculum requirements.

In the event that a student resigns or is dropped from the James Scholar Program that student will be required to satisfy all regular requirements for promotion or graduation. This might involve taking examinations previously skipped as well as taking additional clinical rotations.

### Prerogatives of the James Scholar

James Scholars are asked to meet stringent entrance criteria and demonstrate increased academic rigor. In return, James Scholars enjoy certain privileges to facilitate their medical education. These benefits include special seminars or colloquia, travel awards, mentorship and recognition at graduation.

### Study-in-Depth Support

Wide variability exists regarding the need for financial support to sponsor studies-in-depth. Not all studies-in-depth need major funding. Theses, literature reviews, case reports, and certain clinical studies might qualify as scholarly activity and yet require little in the way of funding. For those projects requiring financial support, several possibilities exist. While there is at present no fund to specifically provide financial support for James Scholar studies, some possible sources include internal funding from MSP funds, support drawn from the mentor's research grant, internal funds from specific departments, grants, or unrestricted gifts obtained from extramural sources. At present under University regulations, James Scholars are not permitted to receive stipends (i.e., receive a salary) to conduct research which will be used to fulfill or complete the James Scholar research project. It is permissible, however, to use acquired funds to directly support the purchase of supplies, experimental animals, equipment, support services, etc. for use in the James Scholar study-in-depth.



# JAMES SCHOLAR PROPOSAL OUTLINE

## **Title Page**

## **Table of Contents**

### **Abstract**

200-300 words describing the proposal in plain language

Background,

Objective,

Study method

Design

Subjects

Procedure

Measurement

Analysis

### **Budget**

Equipment, Materials and Supplies

Salaries

Travel

Other

### **Role of the Student** (list of activities, such as the following)

Development of the Project

Study Design

IRB Application and Process

Obtaining Informed Consent

Clinical Examinations

Laboratory Work

Chart Reviews

Data Management

Funding Application

List of Collaborators and Their Roles

### **Biosketch of Investigator (Student)**

### **Letter of Endorsement from Mentor**

### **The Body of the Proposal**

The body (objectives, background and significance, methods) of the James Scholars study-in-depth will be double-spaced using a 12 pt font with a maximum of 8 pages. The maximum of 8 pages does not include abstract, budget, role of the student, biosketch of investigator or letter of endorsement from mentor or appendices.

**Objectives (Aims) of this Project** (0.5 pages or less double spaced)

**Background and Significance** (2-3 pages)

**Study Methods** (2-4 pages)

## **Background and Significance** (2-3 pages)

Provide the scientific background information to support the objectives of the study.  
Include references that provide the rationale for the project or procedure to be used.  
Describe the research problem with significance explicitly stated.  
Evaluate current knowledge.  
State the limitations that have hindered prior research.  
Describe how this project will contribute to the field.  
Demonstrate the study is feasible.

## **Study Methods** (2-4 pages)

### **Study design:**

Give an overview of design and conceptual framework.  
State the hypothesis in context of research protocol.

### **Subjects:**

Give the rationale for the sample size.  
Estimate the number of subjects, age (inclusive), sex (estimate M:F ratio).  
Describe the population from which the sample will be drawn.  
State the inclusion/exclusion criteria for subjects.  
Include the procedure to recruit subjects. Attach any recruitment or advertising materials.  
Describe the theoretical risks or potential benefits to (1) research subjects, (2) others.  
Describe alternative treatments to patients.

### **Procedure:**

Outline the research procedure to be followed.  
Include a proposed time line.

### **Measurement:**

Describe how the descriptive, control, predictor, outcome variables will be measured. (Use the Variable Table on Page 11, first 3 columns.)  
Include any forms that would be used as an audit form for a chart review.  
Include a description of each laboratory measure if there are to be specimens analyzed. Include the instrument for tests and surveys in an appendix and describe any validity or reliability that is available. If the study includes establishing validity and reliability, state how it will be established.

### **Analysis:**

State how the study variables will be used to describe the sample, determine findings or test the questions/hypothesis.  
Include an analysis plan.

### **IRB:**

State whether or not IRB approval will be sought for the study.  
Comment on precautions and safeguards to be taken to insure the welfare of subjects and minimize risks with particular attention to vulnerable populations.

### **Innovation:**

How will this study-in-depth contribute to the medical literature in ways that are not presently known?

**Appendices:** as appropriate (such as variable table, copies of instruments, etc.)

## JAMES SCHOLAR CHECKLIST FOR EVALUATING STUDENT RESEARCH PROPOSALS

When evaluating your assigned James Scholar project, please feel free to add lines for comments.					
Inadequate	Adequate				
1	2	3	4	5	<b>TITLE PAGE</b>
					Does the title describe the study?
					<b>ABSTRACT</b>
1	2	3	4	5	Does the abstract reflect the intended study?
					<b>BUDGET</b>
1	2	3	4	5	Will the budget support the study?
1	2	3	4	5	Have sources of funding been identified to conduct the study?
					<b>ROLE OF THE STUDENT</b>
1	2	3	4	5	Is the student's role in the conduct of the proposed research appropriate?
1	2	3	4	5	Is the amount of time and effort required of the student investigator consistent with the requirements of the James Scholar Program?
					<b>OBJECTIVES (AIMS, PURPOSE) OF THIS PROJECT</b>
1	2	3	4	5	Are the objectives consistent with the James Scholar Program?
1	2	3	4	5	Are the objectives feasible within the James Scholar timeline?
					<b>BACKGROUND AND SIGNIFICANCE</b>
1	2	3	4	5	Are relevant methodological issues cited and major conclusions summarized in the review of existing research?
1	2	3	4	5	Is there a logical continuity between the review of existing research and the objectives of the proposed study?
1	2	3	4	5	Are the scientific limitations of the study noted?
					<b>STUDY METHODS</b>
					<b>-Design</b>
1	2	3	4	5	Is/are the research question(s) or hypothesis(s) testable?
1	2	3	4	5	Is the research design adequate to answer the question(s) or hypothesis?
					<b>-Subjects</b>
1	2	3	4	5	Sample size and rationale
1	2	3	4	5	Do the inclusion/exclusion criteria and recruitment method have promise of yielding the sample size?
					<b>-Procedure</b>
1	2	3	4	5	Is the procedure clearly described?
					<b>-Measurement</b>
1	2	3	4	5	Are the variables described and included in the variable table?
1	2	3	4	5	Are instruments, tests, surveys described?
1	2	3	4	5	Is the validity and reliability of measurement tools given?
					<b>-Analysis</b>
1	2	3	4	5	Is the analysis plan adequate to answer the study question or hypothesis?
					<b>-IRB</b>
1	2	3	4	5	Is IRB approval appropriate?
1	2	3	4	5	Are adequate precautions and safeguards planned?
					<b>-Innovation</b>
1	2	3	4	5	Does this study-in-depth have the potential to contribute new, innovative understanding in the medical literature?

**EVERY VARIABLE in your study should appear someplace on the variable table.**

A variable may be used as more than one function statistically; for example, age may be a descriptive variable and should groups differ on age, then age may be used as a covariate or control variable.

When a variable is used as more than one function, list the variable completely under the first function then reference it under the second function. For example, age may be a descriptive variable and later used as a covariate.

### **Functions**

**Descriptive** - Variables used to describe the sample typically all in Table 1

**Outcome** - Variables defined in objectives, hypothesis, study questions which are final outcomes of study such as blood pressure, time to event, etc.

**Predictor** - Variables which may be manipulated in the study such as experimental vs. control condition, also variables which influence the outcome as age of subject, stage of illness

**Other Variables** - Variables typically used as control variables which are not of primary interest but may influence the outcome as age, or when study groups are different in experience and that variable may influence the findings

### **Type of Variable**

**Nominal** - Categories with no hierarchy, such as color of hair, sex, ICDA9 code

**Ordinal** - Categories with hierarchy as pain (none to severe), sleep quality (poor to excellent), frequency of symptoms (infrequent to frequent)

**Interval** - Categories with hierarchy and distance from one interval to next the same as inches, pounds, millimeter, grams, years, days

