



Faculty Senate Executive Committee
Friday, October 3, 2014
9:00a.m. – 11:00a.m. – Adelbert Hall, Room M2

AGENDA

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|------------|---|-------------------------------|
| 9:00 a.m. | Approval of Minutes from the September 8, 2014 Executive Committee meeting, <i>attachment</i> | R. Savinell |
| 9:05 a.m. | President and Provost Announcements | B. Snyder
W. Baeslack |
| 9:10 a.m. | Chair's Announcements | R. Savinell |
| 9:15 a.m. | Revisions to Faculty Handbook: Emeritus Policy, <i>attachment</i> | N. Deming
D. Carney |
| 9:20 a.m. | MA in Patent Practice, <i>attachment</i> | C. Nard
E. Tracy |
| 9:30 a.m. | MS in Physician Assistant Studies, <i>attachment</i> | P. Thomas
E. Tracy |
| 9:40 a.m. | Revisions to Faculty Handbook: Grad Studies Charge, <i>attachment</i> | E. Tracy
D. Carney |
| 9:45 a.m. | Revisions to Faculty Handbook: FSCUE Charge, <i>attachment</i> | J. Ruhl
D. Carney |
| 9:50 a.m. | Approval of Chairs for Faculty Compensation Committee | R. Savinell |
| 9:55 a.m. | Proposed Health Benefits for Gender Affirmation Services, <i>attachment</i> | C. Gregory |
| 10:10 a.m. | Revised Resolution in Opposition to Ohio House Bill 597, <i>attachment</i> | G. Starkman
P. Princehouse |
| 10:20 a.m. | Approval of Faculty Senate Agenda, <i>attachment</i> | R. Savinell |

**Faculty Senate Executive Committee
Minutes of the October 3, 2014 Meeting
Adelbert Hall, Room M2**

Committee Members in Attendance

Alexis Abramson, CSE
Bud Baeslack, Provost
Susan Case, WSOM
Juscelino Colares, LAW
Peter Harte, SOM
Zina Kaleinikova, SODM
Sonia Minnes, MSASS
Carol Musil, SON
Roy Ritzmann, CAS, Vice Chair
Sandy Russ, CAS, Past Chair
Robert Savinell, CSE, Chair
Barbara Snyder, President
Gillian Weiss, CAS

Others Present

David Carney, Chair, By-Laws Committee
Nicole Deming, Chair, Faculty Personnel Committee
John Ruhl, Chair, FSCUE

Guests:

Jessica Berg
Craig Nard

Call to Order

Professor Robert Savinell, chair, Faculty Senate, called the meeting to order at 9:00 a.m.

Approval of Minutes

The minutes of the September 8, 2014 meeting of the Faculty Senate Executive Committee were reviewed and approved. *Attachment*

President's Announcements

The President had no announcements.

Provost's Announcements

The Provost had no announcements.

Chair's Announcement

Prof. Savinell announced that he and the Senate vice chair had been meeting with a number of departments to learn about faculty issues and concerns. They have met with 6 departments and have meetings scheduled with two others. They hope that this will result in better communication between the college/schools and the Senate.

Prof. Savinell urged members to communicate with their school executive committees, their constituent senators, and members of their respective faculty about Senate business.

Revisions to Faculty Handbook: Emeritus Policy

Professor Nicole Deming, chair of the Senate Personnel Committee, presented proposed changes to the emeritus appointment policy. The changes provide a faculty member with due process protections by requiring that both positive and negative recommendations for emeritus appointment be forwarded from the school level to the Provost and eventually to the President who would make a final recommendation to the Board of Trustees. The current policy also provides that a faculty member who leaves the university for a full-time academic position with another institution, may be considered for emeritus appointment at CWRU when his/her full-time affiliation with another institution ceases and the faculty member wishes to retain CWRU as a major part of his/her academic identity. Proposed revisions to this section eliminate the current requirement that the appointment be initiated by the faculty member's former dean and also provide the same due process protections described above. The Executive Committee voted to include the revisions on the agenda for the Faculty Senate meeting. *Attachment*

MA in Patent Practice

Professor Elizabeth Tracy, chair of the Committee on Graduate Studies introduced Professor Craig Nard, who presented the proposed MA in Patent Practice. This program is designed to prepare scientists who want to work with technology innovation but do not want to become bench scientists or intellectual property attorneys. This is the only program of its type in Ohio. It is a one year, 24 credit hour program. Prof. Nard said that they anticipate accepting 5-10 students during the first year of the program. Two or three adjunct instructors will need to be hired. The degree is being offered as an MA rather than an MS because the courses are basically law courses as opposed to science courses. The Executive Committee voted to include the MA in Patent Practice on the agenda for the Faculty Senate meeting. *Attachment*

MS in Physician Assistant Program

Professor Tracy said that the proposal for an MA in Physician Assistant program had been vetted by the Committee on Graduate Studies and that all requests for changes and additional information had been satisfied. Patricia Thomas, Vice Dean for Medical Education, SOM, presented the proposal. Physician Assistant programs are growing rapidly in the US due to a number of factors including an aging population and a shortage of physicians. The program will include seven semesters of work over a 27 month period. They anticipate an inaugural class of 30-35 students enrolling in the fall of 2016. The MA will be administered through the Center for Medical Education in the Division of General Medical Sciences at the SOM. Faculty appointments will be made through the Division. A committee member questioned whether primary faculty appointments could be made into a Center for Medical Education in a Division of General Medical Sciences, since, in his opinion, the Faculty Senate's approval of the

latter in 1986 restricted it to the creation of specialized research Centers not non-research centers such as a Center for Medical Education. Another committee member expressed concern that a greater number of non-tenure track faculty are being hired into programs such as this one and that they may not be receiving the appropriate vetting by faculty in the department/school. Prof. Thomas said that they are proposing to house the MA in the Division of General Medical Sciences because it is primarily a teaching program. The committee was concerned about holding up the program approval until these issues are resolved. A motion was made and seconded to place this proposal on the agenda for the Faculty Senate meeting. The motion was approved with one dissenting vote. *Attachment*

Revisions to Faculty Handbook: Committee on Graduate Studies Charge

Prof. Tracy reviewed proposed revisions to the charge for the Committee on Graduate Studies. The proposed revisions provide clarity with respect to the types of graduate degree programs that require review by the Committee on Graduate Studies. The Committee will also be responsible for oversight and guidance on academic and policy issues for postdoctoral scholars and fellows. The Executive Committee voted to include these revisions on the agenda for the Faculty Senate meeting. *Attachment*

Revisions to Faculty Handbook: FSCUE Charge

Professor John Ruhl, chair of FSCUE, presented proposed revisions to the FSCUE charge. The revisions included moving the definition of the UPF to the first paragraph of the charge; reorganization of the section defining the membership of the Committee; removal of the sentence stating that FSCUE was responsible for the policies governing undergraduate education at the university (since it is really the Faculty Senate); and the inclusion of language referring to the non-UPF course protocol adopted by the Senate at its September meeting. The Committee had also proposed that FSCUE be responsible for making recommendations to the Senate with respect to the outcome assessment of teaching as well as undergraduate degree programs. The Executive Committee felt that this would pose too great of a burden on FSCUE. A motion was made and seconded to amend the proposal and the motion was approved. The Executive Committee voted to include the FSCUE revisions, as amended, on the agenda for the Faculty Senate meeting. *Attachment*

Approval of Chairs for Committee on Faculty Compensation

Prof. Savinell announced that Professor Rakesh Niraj, WSOM, would replace Professor Diana Morris, SON, as the chair of the Committee on Faculty Compensation for the fall semester and that Professor Katy Mercer, LAW, would serve as chair for the spring semester. The Executive Committee approved the appointment of the new chairs.

Proposed Health Benefits for Gender Affirmation Services

Carolyn Gregory, Vice President for Human Resources, reported that during the 2013-14 academic year, the Faculty Senate had approved offering gender affirmation services to faculty and staff as a health care benefit. Ms. Gregory said that the university is prepared to offer these services starting in January of 2015 in three out of the four health insurance plans. Individuals covered under the Kaiser plan will not have the services available at this time. The premiums under the three plans will increase by ¼ of a percent. Services covered under the plans are based on those services available to students under the university's student health care plan and include surgery, hormone therapy and behavioral health. Cosmetic procedures will be excluded. There will be a \$50,000 annual limit under the plan.

There has been a request that breast augmentation be included under the covered services. Few universities include this coverage but OSU will add it to their plan shortly. Ms. Gregory said that this will be considered. The Executive Committee agreed that Ms. Gregory should update the Faculty Senate on this topic and voted to include it on the agenda for the Faculty Senate meeting. *Attachment*

Faculty Senate Position on Ohio House Bill 597

Professor Glenn Starkman presented the revised Faculty Senate resolution opposing Ohio House Bill 597. The Faculty Senate had approved the resolution subject to minor changes being made and approved by the Executive Committee. The resolution had been revised to delete calls to action by specific individuals such as the sponsor of the Bill and the Governor. A motion was made and seconded to approve the revised resolution after adding the word "students" which had been inadvertently omitted from section e). The Executive Committee approved the motion. *Attachment*

Approval of Faculty Senate Agenda

The agenda for the October 15th Faculty Senate meeting was approved.

The committee continued its discussion of the process by which non-tenure track and adjunct faculty are hired. This process should be spelled out in the respective school's by-laws and a suggestion was made that school representatives check their by-laws to make sure that the school is following the correct procedure.

The meeting was adjourned at 10:56 a.m.

Approved by the Faculty Senate Executive Committee

A handwritten signature in cursive script that reads "Rebecca Weiss".

Rebecca Weiss
Secretary of the University Faculty

VI. Emeritus Appointment*

Emeritus appointment is bestowed as an honor upon retired full-time faculty in recognition of meritorious service to Case Western Reserve University. ~~It is contingent on initiation by departmental faculty eligible to vote, the department chair, the designated and on support and approval of the constituent faculty appointment, promotion and tenure committee, and the dean, and the provost, to as well as the president and University Board of Trustees of the University.~~ **The process for appointment to Emeritus status requires a recommendation, either positive or negative, and on support and approval of the constituent faculty appointment, promotion and tenure committee, and the dean, and the provost, to as well as the president and University Board of Trustees of the University.** **The president will make the final decision to forward candidates for conferral of Emeritus status by the University Board of Trustees.** **The privilege of emeritus appointment implies a collegial relationship between the awardee and the University to the mutual benefit of both [this last sentence was relocated from the paragraph below].** It is expected that candidates for emeritus appointment will meet the following conditions:

- **Consent of the faculty member;**
- Meritorious contributions to the school and to the University;
- **Continuous** Service of at least ten years as a full-time faculty member;
- Minimum retirement age of 60. In exceptional cases, a faculty member who retires early because of disability may be considered for emeritus appointment at an earlier age, provided that the other conditions have been met.
- Retirement from full-time active service at Case Western Reserve University.

If a faculty member resigns and immediately accepts a full-time academic position at another university, the emeritus appointment would not be made. At the point, however, where **full-time** affiliation at another university ceases and the faculty member wishes to retain Case Western Reserve as **a major part of his or her primary** academic identity, an emeritus appointment may be considered **pursuant to the procedure described above.** ~~on initiation of the candidate's former department, provided that the other conditions have been met. With the support of the department and/or school, these and other unusual cases will be considered and a determination made by joint action of the chair of the Faculty Senate and the provost of the University. Their recommendation, if affirmative, will be transmitted for action by the president to the Board of Trustees.~~ A faculty member may not be promoted at the time of emeritus appointment.

Emeritus appointment is not ~~intended to be routine and is not~~ accorded to part-time faculty members. This restriction shall not apply to someone who has chosen a modified (50% or greater) appointment after satisfying the ten-year service requirement. Clinical faculty in the School of Medicine, however, are eligible to be considered for emeritus status. ~~The privilege of emeritus appointment implies a collegial relationship between the awardee and the University to the mutual benefit of both.~~

Once awarded, an emeritus appointment is for life and may not be withdrawn.

In addition to the privileges associated with retirement, CWRU emeritus faculty are generally awarded other perquisites, some of which include free parking when space is available, personal tuition waiver privileges, the use of CWRU libraries and some other facilities, listing in the university directory, being invited to various faculty functions, the same access to IT support and software as that afforded to regular full-time faculty, etc. Office space may be provided depending on the needs of the department or school.

Faculty members who retire (without emeritus status), take a position elsewhere or are otherwise separated from the university, may establish forwarding of their CWRU enterprise email messages to a personal email account.

Certain key university administrators may be recommended for emeritus appointment by the president to the Board of Trustees.

**approved by the Board of Trustees 9/22/87; approved by the Faculty Senate 3/25/09; approved by the Faculty Senate 2/22/12.*

Program Statement for Masters in Patent Practice

This memorandum describes the program for a *Masters in Patent Practice* at the Case Western Reserve University School of Law. The proposal was initiated by Professor Craig Nard and Interim Deans Jessica Berg and Michael Scharf. The proposal has the deans' full support.

General Description

The *Masters in Patent Practice* is designed to prepare students for a career as patent agents.¹ The program is open only to candidates who are eligible to sit for the patent bar exam, which requires the candidate to possess an undergraduate degree in engineering, computer science, or one of the physical or biological sciences as set forth in the U.S. Patent and Trademark Office's Rules of Eligibility.²

Rationale and Mission

The purpose of the degree program is to prepare a cadre of students for successful careers as patent agents. In any given year, recently graduated engineers and scientists enroll in law school with the goal of becoming patent lawyers, but over the past few years, a growing number

¹ A patent agent is someone who does not have a JD degree, but has passed the patent bar and is therefore licensed to prepare, file, and prosecute patent applications before the U.S. Patent & Trademark Office ("USPTO"). The USPTO website states there are currently 31,699 patent attorneys and 10,740 patent agents. See <https://oedci.uspto.gov/OEDCI/> (last visited on May 15, 2014).

² See [uspto.gov/ip/boards/oed/exam/GRB_January_2014.pdf](https://www.uspto.gov/ip/boards/oed/exam/GRB_January_2014.pdf). Eligibility to sit for the patent bar can also be satisfied if the student fits into the USPTO's "Category B" eligibility requirements, which provides for a combination of credit hours from various technical disciplines as set forth by the USPTO's Rules of Eligibility. The proposed *Masters in Patent Practice* will also consider applicants who are moderately shy of eligibility with respect to credit hours, but have expressed a willingness to enroll in the necessary science or engineering courses to fulfill eligibility requirements.

have become reluctant to invest in a three-year JD program. The proposed *Masters in Patent Practice* seeks to provide a viable alternative for these students. A career as a patent agent enables engineers and scientists to stay close to their technological specialty, yet provides a livelihood that has comparative advantages over that of a practicing engineer or bench scientist.³

Indeed, the patent law landscape over the past 10 years has witnessed the growing importance of patent agents. Most IP boutique firms or IP practice groups within general firms have at least one, and oftentimes several, patent agents; and it is also common for patent agents to work in-house for corporations of all sizes. The *Masters in Patent Practice* will not only prepare the engineer and scientist to take the patent bar, but will introduce them to the nuances of patent searching, the complexities of patent drafting, and the arcana commonly associated with patent law doctrine and USPTO regulations.

Requirements for Admission to the Masters program

- Candidates must be eligible to sit for the patent bar⁴
- Candidates must have a strong academic record.

Admissions decisions will be based on the ability of the student to thrive in our academic program, as evidenced by the applicant's academic record and professional accomplishments, and on the candidate's ability to add to the richness of the academic and

³ For example, according to the American Intellectual Property Lawyers Association's "Report of the Economic Survey 2013," the average salary of a patent agent with fewer than five years of experience at a private law firm is \$92,250, with the first and third quartile range of \$55,500 to \$126,250.

⁴ As indicated in footnote 2, the *Masters in Patent Practice* will also consider applicants who have expressed a willingness to enroll in the necessary science or engineering courses to fulfill eligibility requirements.

extra-curricular programs of the J.D. students. Admissions decisions will be made by the Dean of the law school and the Director of the Center for Law, Technology & the Arts.

Program Description

The program will prepare engineers and scientists for a career as patent agents. Our program is 24-credit hours and will take one year to complete. The proposal anticipates the need for an additional three course offerings, namely (1) *Patent Drafting and Prosecution*, (2) *Patent Bar Review*, and (3) *Claim Drafting Lab*. The progress of the Masters Degree candidate will be assessed midway through the academic year by the director of the Center for Law, Technology & the Arts to determine whether the candidate's progress is satisfactory and merits continuation in the program.

Demand For Our Program

We have not undertaken a systematic marketing and feasibility study. But the Director of the Center for Law, Technology & the Arts has received numerous inquiries over the past year from undergraduate engineering students as well from graduate students majoring in a physical or biological science about law school programs focused on patent agent training. As noted above, many of these students are reluctant to invest in three years of law school, but remain very interested in patent law and a career as a patent agent. We anticipate admitting 5-10 students per year, but this number may increase as the reputation of the program grows.

We are aware of only three other programs that focus on training engineers and scientists for careers as patent agents. The University of Notre Dame offers a "Masters of Science in

Patent Law;”⁵ Webster University has a “Masters in U.S. Patent Practice;”⁶ and Arizona State University offers a “Masters of Legal Studies in Patent Practice.”⁷

Marketing

We expect enrollment in the *Masters of Patent Practice* program to be between 5-10 students per year. Our website will be our most effective marketing tool.

Administration

The *Masters of Patent Practice* program will be under the direction of Professor Craig Nard, the Galen J. Roush Professor of Law and Director of the Center for Law, Technology & the Arts.

Administrative support will be provided by the existing administrative structure within the law school. The masters program will not put undue burdens on the operations of our Office of Admissions, Career Planning, or the Registrar. We anticipate hiring an additional two to three adjuncts to teach in the program.

Tuition and Financial Aid

No financial aid will be made available to the students from the law school budget for the Masters program.

⁵ See www.patentlaw.nd.edu.

⁶ See www.webster.edu/masters/us-patent-practice.html

⁷ See www.law.asu.edu/admissions/Admissions/MLSMasterofLegalStudiesProgram/MLSPatentPractice.aspx.

Also, in 2013, George Washington University announced it was planning to launch a “Masters of Patent Practice.” See www.mediarelations.gwu.edu/gw-launch-new-master-patent-practice-degree.

Impact on J.D. Program, Facilities, and Support Services

This program will have a positive impact on our J.D. program, and we can accommodate the size of a program that we envision with existing facilities and administrative support.

The proposed program may add a moderate burden to staff and faculty, but we believe that this additional burden will be strongly outweighed by the benefits of the program. The non-monetary benefits of the program are likely to outweigh the non-monetary costs.

Many of our JD students are engineers or scientists, and we believe the presence of additional technically trained students will enrich the educational experience for all of our J.D. students and faculty.

We have adequate space for the additional 5-10 students per year. The only space requirement will be for law library carrels during the student's required year of residency.

APPENDIX A

Masters in Patent Practice Description

The *Masters in Patent Practice* is a masters degree offered by the law school. The degree is primarily intended for training students to be patent agents. Currently, there are three other institutions that offer a degree focused on training patent agents.⁸

The proposed *Masters in Patent Practice* offers 24-credit hours of course work, including a clinical experience. All of the courses and clinical experience are designed to train students to represent clients (inventors) before the U.S. Patent & Trademark Office.

⁸ See footnote 5-7, *supra*.

MASTERS IN PATENT PRACTICE COURSE OF STUDY

Students must successfully complete a total of 24 credits as set forth in the Course of Study to obtain the *Masters in Patent Practice*.

FALL	SPRING
IP Survey (3)	Patent Bar Review (4)
Patent Law (3)	LTA Elective Course (3)
Patent Preparation and Drafting I (3)	Patent Preparation and Drafting II (2)
Commercialization & IP Management (3)	Experiential Elective (3) <i>or</i> Claim Drafting Lab (3)

NEW COURSE DESCRIPTIONS

Patent Preparation and Drafting I: Patent preparation, drafting, and filing of a patent application are the fundamental aspects of patent practice. Students will learn how to conduct a client-inventor interview, what questions to ask the client-inventor and what information is most important to obtain prior to commencing the patent drafting process. Technical aspects of patentability searching will also be explored. In addition, the student will learn the various parts of the patent application and best practices associated with drafting each part. Emphasis will be placed on specification drafting and claim drafting, and how to claim around prior art.

Claim Drafting Lab: The patent claim is the most important part of the patent application, because it is the claim that represents the metes and bounds of inventor’s property right. This Lab is devoted to drafting claims, understanding the different types of claims, and how claims

differ depending on the nature of the technology. A particular emphasis will be placed on computer-implemented (e.g., software) and biomedical-related inventions (e.g., life science and biomedical devices)

Patent Bar Review: Passing the patent bar is a requirement for practicing before the U.S. Patent & Trademark Office (“USPTO”). This course will introduce students to 35 U.S.C. (the United States “patent laws”) and 37 C.F.R. (Code of Federal Regulations encompassing the “patent rules”), followed by an in-depth study of the M.P.E.P. (Manual of Patent Examining Procedure), which is the Patent Office’s rule book that covers all the patent laws and rules as interpreted by the USPTO. In addition, the course will cover the particulars of the patent bar exam, including questions from prior exams; essential materials the students need to master to pass the exam, and provide students with several opportunities to hone their bar taking skills.

II (B) Review of the FP by RACGS Member Institutions

(1) Academic Quality: Competency, experience, and number of faculty, and adequacy of students, curriculum, computational resources, library, laboratories, equipment, and other physical facilities, needed to mount the program.

The *Masters in Patent Practice* program would be supported by one dedicated director, at least one staff member, and the library staff. The library has 26,778 linear feet of materials, with 352 available student seats or carrels. There are two, thirty-computer labs, one of which is used for instruction; an on-site technical computer staff; and, an on-site, full-time computer program tutor.

(a) In addition to this analysis, for entry level graduate degree programs, academic quality assessment will focus on the adequacy of the answers provided in response to the following questions:

There are only three other institutions in the United States that offer a masters degree for aspiring patent agents. While the *Masters in Patent Practice* is not a requirement for practicing before the U.S. Patent & Trademark Office, a student who enrolls and completes the requirements of this degree will be better prepared and more competent to represent clients before the U.S. Patent & Trademark Office.

i. Is the program distinctly different, both conceptually and qualitatively, from the undergraduate degree programs in the same or related disciplines? If so, is there a detailed listing of the specific differences?

There is no undergraduate program in this country that prepares students for a career as a patent agent. At the graduate level, there are only three other programs in the country that offer a masters degree focused for aspiring patent agents. The University of Notre Dame

offers a “Masters of Science in Patent Law;” Webster University has a “Masters in U.S. Patent Practice;” and Arizona State University offers a “Masters of Legal Studies in Patent Practice.”⁹

ii. Does the program emphasize the theoretical basis of the discipline as expressed in the methods of inquiry and ways of knowing in the discipline?

The proposed *Masters in Patent Practice* assumes an undergraduate or graduate degree in engineering, computer science, or a physical or biological science. The *Masters in Patent Practice* program will familiarize students with both the theoretical and practical aspects of patent practice and its methods of inquiry.

iii. Does the program place emphasis on professional decision making and teach the use of critical analysis in problem solving?

The *Masters of Patent Practice* program will emphasize, at a minimum, professional decision making and critical analysis commonly associated with representing clients before the U.S. Patent & Trademark Office.

iv. Is the program designed to educate students broadly so that they have an understanding of the major issues and concerns in the discipline or professional area.

A student in the *Masters of Patent Practice* program will have been educated already broadly in the major issues and concerns of the technical discipline such as engineering or science, which is an important part of being a patent agent. The *Masters of Patent Practice* program will expose the student to the major issues and concerns relating to patent law, rules, and regulations associated with representing clients before the U.S. Patent & Trademark Office.

⁹ See footnotes 4-6, *supra*.

v. Does the design of the program include a capstone experience, such as an exit project (which would not necessarily be a research experience)?

The *Masters of Patent Practice* program provides a capstone experience for the student in the form of a clinical experience, wherein the student is presented with an opportunity to directly represent a client before the U.S. Patent & Trademark Office, including the drafting and filing of a patent application.

vi. Does the proposed program identify faculty resources appropriate for the research component of the program?

A member of the law school faculty with expertise in the student's subject matter must commit to guiding the student and providing oversight. The faculty member must agree to undertake this task in writing and explain the professor's belief in the prospective student's ability to successfully undertake and complete the program.

vii. Does the program curriculum offer what students need to know for competence at the expected level of professional expertise.

The master's program student is required to successfully complete 24-credit hours of coursework. The coursework is specifically designed to expose the student to the doctrine, regulations, and policy of patent practice.

(b)

i. What admission criteria, in addition to the traditionally required transcripts, standardized test scores, letters of recommendation, and personal statements of purpose, will be used to assess the potential for academic and professional success in prospective students? The special consideration of student experience and extant practical skills within the admission process should be specifically noted.

All students must possess an undergraduate or graduate degree in engineering, computer science, a biological or physical science, or a sufficient amount of credits in one of the

aforementioned disciplines. Students will have demonstrated outstanding ability in their undergraduate or graduate programs.

Lastly, the applicant's professional accomplishment's or the applicant's ability to add to the richness of the academic and extra-curricular programs of J.D. students, will be considered.

Admissions decisions will be made by a committee consisting of the Dean of the law school and the Director of the Center for Law, Technology & the Arts

ii. If field/clinical experience is subsumed within the academic experience, how does that experience related to the academic goals of the professional graduate degree program? Provide a description of the involvement of supervisory personnel. Describe the level of communication between the field/clinical experience site and the academic department. Provide an outline of the anticipated student activities as well as student requirements.

The *Masters in Patent Practice* program is focused on training students to be patent agents.

As part of this training, the student will have the opportunity to engage a clinical experience representing clients before the U.S. Patent & Trademark Office. The clinical experience will be supervised by a full-time faculty member, who will meet with the student on a weekly basis to discuss the student's experience.

iii. If the faculty qualifications associate with the professional graduate degree program differ from national norms and the traditional standards of faculty excellence, how do such qualifications differ and why do they differ? Provide the specific qualifications of adjunct, part-time, and special faculty who do not hold traditional academic credentials. Also, give a rationale for such faculty without academic credentials to participate in the professional degree program as regular program faculty.

Only tenured, tenure-track, and adjunct legal faculty who are highly experienced in patent practice will teach in the *Masters of Patent Practice* program and supervise and counsel students.

iv. How does accreditation by the appropriate professional organization relate to the academic experience outlined in the program plan? Describe the specific aspects of the program plan, if any, that are necessary to achieve professional accreditation.

In order to achieve professional accreditation, it is necessary that the American Bar Association Committee on Legal Education “acquiesce” in the offering of the degree. The American Bar Association requires that a program provide adequate administrative and faculty support, adequate physical facilities, adequate law library support, and not detrimentally affect the diversity and richness of J.D. course offerings.

v. What is the relationship between theory and practice as expressed within the proposed curriculum? Identify a set of core courses and show how the curriculum enhances the student’s professional preparation.

There are a total of eight courses in the *Masters of Patent Practice* program (a total of 24-credit hours) that are designed to marry the theory and practice of representing clients before the U.S. Patent & Trademark Office. These courses include:

1. Intellectual Property Survey
2. Patent Law
3. Patent Drafting and Prosecution I
4. Patent Drafting and Prosecution II
5. IP Management and Commercialization
6. Patent Bar Review
7. Claim Drafting Lab
8. IP Venture Clinic or Experiential Elective

vi. Does the number of credit hours required for graduation differ significantly from traditional graduate degree programs? How is the number of credit hours required for graduation influenced by mandated professional experiences?

The number of credit hours required to complete the *Masters of Patent Practice* program (24-credit hours) does not differ significantly from traditional graduate degree programs

vii. Can it be demonstrated that the culminating academic experience, such as an exit project, thesis or dissertation, will contribute to the enhancement of the student's professional preparation? In support of the response here, provide a list of possible research projects, theses, or dissertation topics.

The student will engage in a series of drafting and writing projects, culminating in a capstone experience of representing actual clients before the U.S. Patent & Trademark Office. These projects include preparing patentability opinion letters, drafting patent applications and amendments to the applications in response to the patent office.

(2) Need for such a program: student interest; potential enrollment; societal demand; local, regional, national, and international needs.

The *Masters of Patent Practice* program will accept between 5-10 students per year. The program will be very highly selective. Currently, there are only three other institutions that offer a masters degree for students interested in becoming patent agents. Patent agents are in high demand in the United States, and an increasing number of engineers and scientist have become interested in careers in patent law, but are reluctant to invest in three years of law school. A one-year program such as the proposed *Masters of Patent Practice* is designed to meet this growing demand

(3) Access and Retention of Underrepresented Groups:

The *Masters in Patent Practice* program will be open to all interested students, and engage in an aggressive effort to recruit underrepresented groups. These efforts will include (1) building

relationships with chairs of engineering and science departments, particularly at schools that have large populations of underrepresented groups (e.g., HCBUs); (2) develop effective networks; (3) attend and present the *Masters of Patent Practice* program at minority-focused fairs and conferences (e.g., Annual Biomedical Conference for Minority Students); (4) offer campus visits and research opportunities; and (5) communicate inclusiveness efforts.

(4) Statewide Alternatives

A *Masters in Patent Practice* is not currently offered in the state of Ohio. Admission to the masters program at Case Western Reserve University School of Law would be strictly limited only to students of the very highest academic potential.

(5) External Support: Community, Foundation, Governmental, and other Resources.

While endowment may be sought, the *Masters in Patent Practice* program can be fully supported from the operating budget, including endowment funds from the Center for Law, Technology & the Arts. As part of the significant interdisciplinary initiatives of the law school, and the Case Western Reserve University's prioritization of the complete integration of the law school into the university's fuller community, masters students will have the full academic support of the university as a whole.



CASE WESTERN RESERVE
UNIVERSITY
SCHOOL OF MEDICINE

**Proposed
Master of Science in Physician Assistant Studies
Case Western Reserve University School of Medicine**

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Proposed Program: Master of Science in Physician Assistant Studies

Program Development Plan

1. Intellectual Rationale and Purpose:

The School of Medicine of Case Western Reserve University (CWRU) proposes a full-time Master of Science in Physician Assistant (PA) Studies program to be housed in the Office of Medical Education. As the PA profession has evolved to one that requires a high degree of academic rigor, the accrediting body for Physician Assistant programs – the Accreditation Review Commission on the Education for the Physician Assistant (ARC-PA) – has stipulated a master's degree as the appropriate degree level.

The process for accreditation of a master's degree program in Physician Assistant Studies is a long one. The ARC-PA accredits programs offered by higher education institutions chartered by and physically located in the United States. The institution has to have the appropriate regional accreditation and be in good standing. The accrediting body must authorize the institution to confer the Master of Science degree in Physician Assistant Studies. The requirement of a master's degree is a relatively new one in the field. All new programs must, however, confer a master's degree on graduate. With only a few programs still being grandfathered, currently 91% of programs offer a master's degree.

The ARC-PA has a mandatory site visit, and those are planned well in advance. For CWRU, the site visit is scheduled for December 3-4, 2015, in order to offer the degree in the 2016-2017 academic year. By the time of the site visit, all appropriate approvals from the School of Medicine, Case Western Reserve University, and the Ohio Board of Regents must be attained. The process for this proposal will be the School of Medicine's Faculty Council, then to the University's Faculty Senate, and finally to the Ohio Board of Regents.

The CWRU program will graduate caring physician assistants equipped with the competencies to deliver the highest quality health care under the supervision of a licensed doctor of allopathic or osteopathic medicine, to be leaders in the profession, and who are devoted to the positive transformation of the nation's health care system. The program will build upon the School's

reputation as a leader and innovator in medical education and combine a didactic foundation of great depth with world-class clinical experiences. The program will require the completion of seven consecutive semesters over 27 months. The first fifteen months will be devoted to preclinical studies, the remaining twelve months to clinical experiences in primary care and the medical and surgical specialties. All courses will be required, no transfer credit will be accepted, and no credit will be awarded for pre-admission experiential learning.

Physician assistants (PAs) provide care to patients under the direction and responsible supervision of a doctor of medicine or osteopathy. PAs provide a wide range of diagnostic, therapeutic, and services in primary and specialty care specialties, and they are present in medical and surgical areas. The program at CWRU will draw from a national pool of highly qualified applicants. While much of the curricular content is determined by the accrediting body (ARC-PA), as a top tier medical school, CWRU can offer faculty at the very top of their discipline, world class clinical experiences, and a competitive pricing structure that we are confident will yield a strong applicant pool. Further, the School of Medicine offers the ability for PA students to train in parallel with students pursuing a doctor of medicine degree, something that no other program in our region affords. Only Ohio State University and Ohio University in our state present the opportunity to educate future physicians and physician assistants in concert. Further, construction of our new state of the art medical education building, with the PA program being planned for in the design, will clearly be a draw for applicants.

The mission of the Master of Science in Physician Assistant Studies at CWRU is to prepare learners to be leaders in physician assistant practice in a variety of clinical settings who are able to function as members of an interprofessional health care team. In particular, the program aims to address the growing health care need in our region, with a focus on professional clinical practice in the northeastern Ohio region.

2. Proposed Curriculum:

The program curriculum prepares students to work as part of a physician-PA team in an inter-professional team environment. The curriculum includes applied medical sciences, patient assessment and evidence-based clinical medicine, supervised clinical practice, health information technology, and health policy and health delivery system discussions. The combination of a rigorous curriculum in an academic medical center, frequent assessment of student competence, opportunities for practical application during the foundational basic science phase, clinical rotations in state-of-the-art hospital settings, and summative evaluation of learners ensures that students are competent to enter clinical PA practice in any setting upon graduation.

Sample curricula from leading programs across the country are attached as Appendix A. It is expected that the curriculum at CWRU will closely mirror those curricula as those programs are of comparable length to the CWRU program. Regardless of the ultimate course name or number at CWRU, the following subject areas specified in the ARC-PA accreditation standards manual as required for a curriculum for granting a degree:

Content Area	Objectives
Clinical Preparatory Instruction	<ul style="list-style-type: none">• Instruction about intellectual honesty and appropriate academic and professional conduct• Instruction for the provision of medical care to patients from diverse populations• Instruction related to the development of problem solving and medical decision-making skills• Instruction to prepare students to work collaboratively in inter-professional patient centered teams.• Instruction in the following areas of applied medical sciences and their application in clinical practice:<ul style="list-style-type: none">▪ Anatomy▪ Physiology▪ Pathophysiology▪ Pharmacology and pharmacotherapeutics▪ Genetic and molecular mechanisms of health and disease• Instruction to prepare students to work collaboratively in inter-professional patient centered teams.• Instruction in clinical medicine covering all organ systems• Instruction in interpersonal and communication skills• Instruction in patient evaluation, diagnosis and management• Instruction in the provision of clinical medical care across the life span• Instruction in technical skills and procedures based on current professional practice

- Instruction in basic counseling and patient education skills
- Instruction to prepare students to search, interpret and evaluate medical literature, including application to individualized patient care
- Instruction in health care delivery systems and health policy
- Instruction in the concepts of public health and they relate to the role of the practicing PA
- Instruction in patient safety, quality improvement, prevention of medical errors and risk management.
- Instruction about PA licensure, credentialing and laws and regulations regarding professional practice
- Instruction regarding reimbursement, documentation of care, coding and billing
- Instruction in the principles and practice of medical ethics
- Instruction in the PA profession, its historical development and current trends.

Supervised Clinical Practice:

- PA students will be clearly identified in the clinical setting to distinguish them from physicians, medical students and other health profession students
- Supervised clinical practice will enable students to meet program expectations and required competencies to include preventive, emergent, acute, and chronic patient encounters.
- Supervised clinical practice will provide patient exposure to:
 - Medical care across the life span
 - Women’s health
 - Pre-operative, intra-operative and post-operative care
 - Care for behavioral and health conditions
- Supervised clinical practice will occur in
 - Outpatient settings
 - Emergency department
 - Inpatient settings
 - Operating room
- Supervised clinical practice will occur in :
 - Family medicine
 - Internal medicine
 - General surgery
 - Pediatrics
 - OB/GYN
 - Behavioral and mental health care

The Master of Science in Physician Assistant Studies program at CWRU consists of seven semesters of study. Four of these semesters (first and second summers, first fall and first spring semesters) are comprised of foundational, basic sciences. The following three semesters (second fall, second spring and third summer semesters) are comprised of required and elective clinical rotations to prepare the graduate for care in a variety of clinical settings. These experiences include four clinical elective periods that allow graduates to selectively prepare themselves for a career of their choosing. While the program will ultimately house fifty students per year, there will be a ramp-up period, coming to full class size by year three of the program.

The proposed curriculum begins with four semesters of foundational basic sciences. The purpose of these courses is to prepare learners with content knowledge and skill acquisition for care of patients in the clinical setting. To achieve these objectives, the following foundational basis science courses are proposed. For courses that must be created, the proposed title is in italics. The Center for Medical Education (CMED) will be the administrative unit that will house the proposed courses in the curriculum.

Foundational Basic Science Curriculum *Italicized Courses will be created:*

Course	Credit Hours
First Summer	
ANAT 410: Anatomy	6
<i>CMED 421. Foundations of Clinical Medicine</i>	2
<i>CMED 431. Professional Issues for Physician Assistants</i>	1
Fall Semester	
BIOC 407. Introduction to Biochemistry: From Molecules To Medical Science	4
PHOL 479. Physiology of Organ Systems	4
<i>CMED 411. Pharmacology for Physician Assistants</i>	3
<i>CMED 441. Principles of Clinical Medicine</i>	3
<i>CMED 422. Foundations of Clinical Medicine</i>	2
<i>CMED 432. Professional Issues for Physicians Assistants</i>	1
Spring Semester	
<i>CMED 450. Pharmacotherapeutics</i>	3
<i>CMED 442. Principles of Clinical Medicine</i>	3
GENE 525. Clinical Genetics	2
NTRN 365. Nutrition in Disease	4
<i>CMED 423. Foundations of Clinical Medicine</i>	2
<i>CMED 433. Professional Issues for Physicians Assistants</i>	1
Second Summer	
<i>CMED 460. Clinical Procedures</i>	4
<i>CMED 470. Culture and Health</i>	3
<i>CMED 434. Professional Issues for Physicians Assistants</i>	1
TOTAL	49

Existing Courses to be Included in the Curriculum

ANAT 410. Cadaver dissection-based human anatomy with histology, neuroanatomy, embryology, and physiology. 6 Units. Human Anatomy will provide students with a sound understanding of the normal human body as a foundation for subsequent pursuing biomedical careers. A combination of daily lectures and laboratories integrates cadaver dissection-based gross anatomy with the associated histology, embryology, neuroanatomy and basic physiology and clinical correlates. This course is well-suited to all biomedical careers, including pre-clinical and biomedical undergraduates, post-baccalaureate, pre-clinical Master of Science graduate programs, plus medical and dental students seeking additional training in the anatomical sciences. It will meet any of the anatomy-oriented prerequisites being implemented for medical and dental school applications, including those preferring or requiring a cadaver-based experience. The assessments will include a combination of written and cadaver-based practical questions.

BIOC 407. Introduction to Biochemistry: From Molecules To Medical Science. 4 units. This course provides an overview of the macromolecules and small molecules key to all living systems. Topics include: protein structure and function; enzyme mechanisms, kinetics and regulation; membrane structure and function; bioenergetics; hormone action; intermediary metabolism, including pathways and regulation of carbohydrate, lipid, amino acid, and nucleotide biosynthesis and breakdown. The material is presented to build links to human biology and human disease.

PHOL 479. Physiology of Organ Systems. 4 Units. This course for physician assistants is based around PHOL 480, without the laboratory component. It presents key aspects of the organ physiology and pathophysiology for: Muscle structure and Function, Myasthenia gravis and Sarcopenia; Central Nervous System, (Synaptic Transmission, Sensory System, Autonomic Nervous System, CNS circuits, Motor System, Neurodegenerative Diseases, Paraplegia and Nerve Compression); Cardiovascular Physiology (Regulation of Pressure and flow; Circulation, Cardiac Cycle, Electrophysiology, Cardiac Function, Control of Cardiovascular function, Hypertension); Hemorrhage, Cardiac Hypertrophy and Fibrillation; Respiration Physiology (Gas Transport and Exchange, Control of Breathing, Acid/base regulation, (Cor Pulmonale, Cystic

Fibrosis, Sleeping apnea and Emphysema); Renal Physiology (Glomerular Filtration, Tubular Function/transport, renal insufficiency, Glomerulonephritis,); Gastro-Intestinal Physiology (Gastric motility, gastric function, pancreas and bile function, digestion and absorption, Liver Physiology; Pancreatitis, Liver Disease and cirrhosis); Endocrine Physiology (Thyroid, Adrenal glands, endocrine pancreas, Parathyroid, calcium sensing receptor, Cushing and diabetes, Reproductive hormones, eclampsia); Integrative Physiology (Response to exercise, fasting and feeding, aging).

GENE 525. Advanced Medical Genetics: Clinical Genetics. 3 Units. Fundamental principles regarding congenital malformations, dysmorphology and syndromes. Discussion of a number of genetic disorders from a systems approach: CNS malformations, neurodegenerative disorders, craniofacial disorders, skeletal dysplasias, connective tissue disorders, hereditary cancer syndromes, etc. Discussions also include diagnosis, etiology, genetics, prognosis and management.

NTRN 365. Nutrition in Disease. 4 Units. The course addresses the interplay among etiology, metabolic perturbations, pathophysiology, clinical signs and symptoms, and nutrition principles for the prevention and management of disease.

Course Descriptions for Proposed Offerings

CMED 421, CMED 422, CME 423. Foundations of Clinical Medicine: Foundations Clinical Medicine is taught in three courses that span the academic year and a summer. These courses are designed to prepare learners to obtain a complete history and perform a complete physical examination on any patient, with special consideration to adjustments regarding gender, age and cultural background and integration of issues of bioethics, patient confidentiality and patient rights. Students will progress body system by body system during this semester. Lectures, demonstrations and simulation will be used. Normal, variations and common abnormal physical exam findings will be introduced. The course will allow students to work in pairs and small groups to develop the history-taking, communication and examination skills.

CMED 431, CMED 432, CMED 433, CMED 434. Professional Issues for Physician

Assistants: This four-semester course is designed to give learners a foundation of practical knowledge about the physician assistants and the US healthcare system. This course will review the history and evolution of the Physician Assistant (PA) profession in this country. The status, trends, and characteristics of PA healthcare providers; their education, regulation, practice patterns, external relations, and professional organizations will be discussed. Issues related to PA health workforce policy, salary and reimbursement, and legal and economic aspects of PA practice will be presented. Current professional issues, such as increasing specialization, globalization, health workforce policy and postgraduate training are addressed. PA career progression and roles in various clinical and professional activities and disciplines will be examined. Topics include contemporary issues in healthcare; healthcare policy; interprofessional health care; the healthcare system; hospitals; ambulatory care; quality assurance and risk management; financing (including insurance, third-party payers and managed care); mental health; and long term care.

CMED 411. Pharmacology for Physician Assistants. 4 Units. This course will provide physician assistant students with a fundamental knowledge of basic pharmacodynamic, pharmacokinetic and pharmacogenomic principles, as well as the basic properties, mechanisms, uses, adverse effects, and drug-drug reactions of those drugs most relevant to the physician assistant.

CMED 441, CMED 442. Principles of Clinical Medicine: This two-course series takes systems approach to the principles of disease processes to provide foundational content in pathophysiology. This course will discuss but not be limited to the following systems: cardiovascular, respiratory, musculoskeletal, hematology and oncology metabolic/endocrine, gastrointestinal, genitourinary, immune, renal, and neurologic. Lectures, demonstrations and simulation will be used. Normal, variations and common abnormal physical exam findings will be introduced.

CMED 450. Pharmacotherapeutics: This course introduces students to the general application of pharmacologic principles to patient care situations. Classes of pharmaceuticals will be studied, with a focus on the mechanisms of drug action in different therapeutic classes, common side

effects of prototypic drugs in each category, drug side effects and drug-drug interactions, the interaction of drugs with the disease state under treatment, polypharmacy, and reputable sources of information about drugs.

CMED 460. Clinical Procedures: Through lectures, case discussion, demonstrations and practice sessions, students will learn to use a variety of the diagnostic and treatment modalities. These clinical procedures include the instruction in, use of, or practice in procedures in the areas of cardiology; pulmonology; nephrology/urology; gastroenterology; men's and women's health, orthopedics/rheumatology, geriatrics and neurology. Students will also become certified in Advanced Cardiac Life Support (ACLS). The content includes common laboratory tests, when to use these tests, and how to interpret and effectively utilize the results. Skills include specimen collection, point of care testing, provider performed microscopy, IV/arterial puncture, clean and sterile procedure and interpretation of laboratory data and normal values.

CMED 470. Culture and Health: This course focuses on cultural perspectives of health and illness including the relationship of health care behaviors and beliefs to culture and social structure. Participants will foster an appreciation for human diversity related to culture and health.

Beginning in September of the second year, learners begin their clinical education curriculum. Clinical rotations follow ARC-PA standards and provide experiences to prepare learners for clinical settings in which PAs practice, preparing them for patients from a variety of ages and clinical presentations. Additionally, our program has added elective rotations in urgent care settings and primary care environments. These rotations are deemed "elective" as the student will be required to have experiences in certain clinical settings, but it will be in a specialty of their choosing (therefore, student "elect" the specialty). For example, all students must have an elective in primary care. But one student might choose to complete this experience in a pediatric setting caring for children, while another might elect for an experience caring for a geriatric population. Additionally, two electives of the students' choosing must be complete. Clinical rotations will each be one month in duration, and the students be assigned to spend their time at clinical training site. During this time, they will encounter patients typical for the specialty, clinical procedures and technical aspects of the discipline, and learn patient diagnosis, treatment

and management from the perspective of that specialty. Under the supervision of a licensed physician assistant or physician faculty member, the learner will progressively take responsibility for the diagnosis, treatment and care for the patients on the clinical service. This curriculum offers the nationally required seven core clinical experiences, and it provides for four months of elective experiences in areas that meet the interests and long-term career goals of the learner.

Clinical Curriculum (beginning in September of Second Year):

Required Core Clinical Experiences	Duration (in months)	Credit Hours
CMED 480. Emergency Medicine	1	5
CMED 481. Family Medicine	1	5
CMED 482. Geriatrics	1	5
CMED 483. Internal Medicine	1	5
CMED 484. Pediatrics	1	5
CMED 485. Psychiatry	1	5
CMED 486. Surgery	1	5
Elective Clinical Experiences	Duration (in months)	Credit Hours
CMED 487. Primary Care	1	5
CMED 488. Intensive Care Medicine	1	5
CMED 489. Elective of Student's Choosing	2	10
TOTAL	11	55

Finally, a longitudinal capstone course will be focused on completion in teams of a health care quality improvement project over the clinical year. The course will be developed as an online course, with milestones throughout the year to ensure that students are progressing. Students will be required to submit a written synthesis of the project. The capstone course will include integration of interpersonal and teamwork skills, patient care skills, and knowledge of health care systems.

Each component of the curriculum will have an evaluation and assessment strategy to ensure competency. To lead this process, each course in the curriculum has a defined set of learning objectives that are stated in the syllabi. Depending on the level of the objective, students will be evaluated through course exams, quizzes, course assignments, and technical and clinical skills assessments. Standardized patient sessions, objective structured clinical examinations (OSCEs) and simulation experiences will be part of the strategy to assess technical and clinical competence.

Summative assessment will be used to assure that the students are appropriately progressing through the curriculum. If a student does not pass one of the evaluation components, the faculty of the Physician Assistant program and the Committee on Students will help students and their Society Dean to identify areas of deficit and develop a plan for remediation. Students will be afforded an opportunity to repeat the failed evaluation.

Each course has a syllabus that outlines instructional objectives that are informed by the accreditation standards to guide student learning. Appropriate examinations and evaluation allow the determination of competence in content domains, clinical decision-making and problem-solving.

Graduation will require completion of two comprehensive examinations: 1) a comprehensive written multiple choice examination, which will be modeled on the Physician Assistant National Certifying Exam (PANCE), to assess medical and surgical knowledge; and 2) a 12-station Objective Structured Clinical Exam (OSCE) to demonstrate communication, psychomotor and clinical reasoning skills. Both examinations will be completed prior to graduation.

Effectiveness of the courses in meeting learning objectives and outcomes will be determined based on data from student evaluations, course performance, faculty observations, preceptor and graduate surveys and the comprehensive examinations. Further, the Physician Assistant National Certifying Exam (PANCE) outcomes will be a measure of the effectiveness of the curriculum. The PANCE assessment, which students must complete within four months of completing the PA Program, is a comprehensive multiple choice exam (based on the NCCPA Blueprint) and an OSCE, which involves assessment of students' knowledge, clinical decision making, clinical skills, communication, professionalism and ethics.

To support students in their progress through the curriculum, the proposed program will extend the Academic Society structure currently used in the School of Medicine. The purpose of the Academic Societies is to provide a comprehensive support system for students so that they can master the academic and professional skills required to be a physician assistant, in an environment that monitors their physical, social and emotion well-being and helps them develop and grow as a individual. This goal is accomplished through advising, teaching, collating assessments, and building a sense of community. The students will be assigned a Society Dean to

serve as a mentor, help students navigate the curriculum and provide students with advice and support for career planning. The Society Dean will be a source for personal advising and professional mentoring, while being a mechanism for building a supportive environment among the physician assistant learners.

3. Administrative Arrangement for Program, Administrative Units Involved

The Physician Assistant Studies Program will be administered through the Office of the Vice Dean for Medical Education of the School of Medicine, and specifically through the Center for Medical Education (CMED). CMED is a part of the Division of General Medical Sciences, through which faculty appointments will be made through. The Vice Dean for Medical Education holds the appointment power within this division.

There are two administrative appointments mandated by the ARC-PA, a Program Director and a Medical Director. A search for the founding Program Director will commence as soon as the program approval is attained from the CWRU Faculty Senate. This will be a 12 month full time position with at least 80% of the Director's time devoted to academic and administrative responsibilities in support of the program. The Program Director will be a Physician Assistant certified by the National Commission on Certification of Physician Assistants (NCCPA) and licensed to practice in Ohio.

In addition to the Program Director, the ARC-PA mandates that all credentialed programs have a Medical Director. The Medical Director must be a licensed, board certified allopathic or osteopathic physician. This position is not mandated as a full-time hire, but we anticipate that a minimum of 0.6 FTE for administrative and educational activities will be required.

The Program Director will have the responsibility to recruit additional faculty to the program. It is anticipated that a minimum of two additional principal faculty positions will be filled by NCCPA certified physician assistants. It is necessary to recruit these positions, as there are no current faculty members who are licensed physicians assistants. In addition to the above, there will be instructional faculty sufficient in number to provide students with the necessary attention, instruction and supervised clinical practice experiences to acquire the knowledge and

competence required for entry into the profession. It is expected that these faculty will be drawn from existing faculty throughout the CWRU School of Medicine.

At the outset, the program will be staffed by an administrative manager, an education coordinator, an admissions coordinator and an administrative assistant. Existing staff within the Office of the Vice Dean for Medical Education will provide staff services for student affairs, financial aid and registration. The admissions process will be handled by the CWRU School of Medicine.

4. Evidence of Need:

The physician assistant profession has been on a rapid growth trajectory – with the number of physician assistant doubling in from 2000 to 2010.

(<http://www.amednews.com/article/20110927/business/309279997/8/>). The Bureau of Labor Statistics (BLS) see the growth in the profession as “much faster than average” and projects a growth of 30% through 2020. The BLS cites population growth, an aging population, more physicians entering specialty areas and the fact that physician assistants are more cost effective than physicians as reasons for their growth projection. There is little doubt the growth will continue, as evidenced by the large number of available job opportunities in Cleveland alone, with even more in Cuyahoga County.

In addition, there is little question of a looming physician shortage. The Association of American Medical Colleges (AAMC) has projected a physician shortage of 125,000 by 2025 – a result of combining an aging population, the influx of over 30 million newly insured in the US as a result of the Affordable Health Care Act, an aging physician demographic (the AAMC reported in 2009 that over a third of physicians were 55 or older), and a freeze in Medicare funding for residency positions. This gap will need to be filled by non-physician health providers. The June 2013 issue of *Health Affairs* presents details on provider preferences from patients’ perspective and suggests that consumers are open to a greater role for physician assistants and nurse practitioners.

Augmenting all the above is the fact that the health care delivery system in the United States continues to evolve new models of care in an effort to reign-in costs while improving patient outcomes. An example is the Patient-Centered Medical Home Care (PCMH) that has advocacy from several professional organizations and has a particular push from the federal government. This model requires a team of providers that using an interdisciplinary approach that coordinates care across all elements of the health care system. The demand for physician assistants will continue to increase as continuity of care becomes more integrated across the spectrum of providers.

This demand has not been lost on academia. In 2000, there were about 126 accredited programs nationally. That grew to 154 in 2010 and to 172 today. There are currently eight programs in Ohio. These are Baldwin Wallace (inaugural class May 2013), Cuyahoga Community College/Cleveland State, Kettering College, Marietta, Mount Union, Ohio Dominican (inaugural class July 2012), University of Findlay, and the University of Toledo. Four additional programs are scheduled for accreditation review in the next couple of years: Lake Erie College, Ohio University, Ohio State University, and the University of Dayton. In spite of the growth in programs, there is still a high demand from the applicant pool as evidenced by many schools attracting 15-20 applicants per available training position. This speaks to a still-present need that is likely to only increase as our health care system transforms and the need for more providers of health care increases.

5. Prospective Enrollment:

The steady state target enrollment is 50 students per cohort. However, the target enrollment for the inaugural class is 30-35 with the full target reached by the third entering class. Per the ARC-PA Standards, the inaugural class will apply directly to Case Western Reserve University through established application process for all graduate programs. Upon receipt of provisional accreditation, all prospective students will apply directly through Central Application Service for Physician Assistants (CASPA).

An Admissions Committee will be comprised of leadership from the Office of Admissions and faculty from the basic and clinical sciences. An effort to include clinical faculty who are both physicians and physician assistants will be made. The committee will select those candidates who show promise of becoming outstanding physician assistants. Decisions will be made based on the applicant's academic record, written narrative statement, personal references, performance on standardized graduate admissions tests (the Graduate Record Exam or Medical College Admission Test), previous health care experience, and a personal formal interview. Applicants are assessed on the qualifications without regard to gender, sexual orientation, color, age, disability, race, religion, veteran status or national origin.

All applicants to the program must have completed a baccalaureate degree, granted by an accredited US or Canadian institution, by the time of matriculation into the program. While international learners are welcomed to apply, there are some points to consider that can make the possibility of matriculation of an international student into the Physician Assistant Studies program slight. First, there is a large pool of well-qualified potential applicants who are US citizens, so the competition is great. Second, because of their non-US citizen status, international students are not eligible for financial aid. International students often take out loans to cover costs, and these must be cosigned by a US citizen. Finally, the restrictions on the visa of international students may make remaining in the US post-graduation difficult. However, some students may still choose to apply for admission. International students will be given consideration equal to domestic students. International students whose first language is not English must demonstrate English proficiency by taking the Test of English as a Foreign Language and earning a minimum score of 577 if paper-based, and 90 if Internet-based. The International Test of English Language is also accepted; the minimum score is 7.0.

Additional requirements for admission to the Master of Science in Physician Assistant Studies are as follows:

- A cumulative and science undergraduate grade point average (GPA) of at least 3.0 (on a 4.0 scale) or for the last 40 semester credits (60 quarter hours) completed.
- Science requirements include:
 - Biology with lab: 4 semester hours
 - Human anatomy with lab: 4 semester hours

- Human physiology with lab: 4 semester hours
- Microbiology with lab: 4 semester hours
- Organic chemistry with lab: 8 semester hours
- Biochemistry (with lab): 4 semester hours
- General psychology: 3 semester hours
- Second psychology course: 3 semester hours (e.g., life span development, abnormal psychology)
- Statistics: 3 semester hours
- Medical Terminology: 2 credit hours
- All courses taken to satisfy the requirements set forth above must:
 - Be completed at a cumulative GPA of 3.0 or better
 - Be completed prior to matriculation
 - Be taken on a graded basis
- All applicants are required to submit scores for the Graduate Record Examination (GRE) General Test. Alternatively, students who have completed the Medical College Admission Test (MCAT) will be considered. The test must have been taken within the past five years and must be taken early enough so that official scores are received in the PA office by the application deadline.
- Previous health care experience is an indication to the Admissions Committee of an applicant's awareness of and commitment to a career in health care. A minimum of 1,000 hours of direct, hands-on, health care experience is required of all applicants.
- A personal interview with the Program Admissions Committee is required. The interview is by invitation only to assess maturity, written and oral communication skills, an awareness of the professional role of the physician assistant and career goals consistent with the program's mission.
- Submission of an on-line application through the Centralized Application Service for Physician Assistants (CASPA).
- The curriculum of the Master of Science in Physician Assistant Studies is sufficiently unique that exemption from or advanced standing in course work is not permitted. All students, regardless of prior academic or work experience, must complete the entire 24 month curriculum.
- Three letters of recommendation; at least one should be from a recent college professor and one from a health care professional who has known the applicant for at least 6 months

The Admission Committee will designate one of the following categories for each interviewed applicant:

- Complete Acceptance: all prerequisite courses and admission requirements are complete.
- Provisional Acceptance: each student will receive in writing the outstanding requirements needed for complete acceptance (e.g. prerequisite coursework).
- Waiting list: Applicant meets admission requirements and may be admitted if accepted applicants forfeit their seats in the program.
- Denied: Those interviewed who are not chosen for admission will be notified in writing.

Case Western Reserve University has a great tradition of commitment to diversity in all of its forms. In the School of Medicine, the Office of Multicultural Programs (OMP) was created in 1971 to consolidate efforts to expand opportunities for underrepresented minorities in medicine. More specifically, the OMP works with the Admissions Office to recruit minority students and to provide academic, social, emotional, and financial support. The OMP has developed extensive relationships with historically black colleges and universities (HBCU) in Ohio and around the country that will be used to help recruit a diverse student body for the physician assistant studies program. The OMP also offers a summer program that may be of interest to students who are considering a career as a physician assistant.

In a similar vein, CWRU is committed to students with disabilities. Disability Resources in Educational Services for Students (ESS) provides direction, support and accommodation for learners who have a physical or mental impairment that substantially limits one or more major life activities. Students who can fully participate in the Physician Assistant Studies curriculum with reasonable accommodation are encouraged to apply for admission.

6. Faculty and Facilities Available to the Program:

There will be instructional faculty sufficient in number to provide students with the necessary attention, instruction and supervised clinical practice experiences to acquire the knowledge and

competence required for entry into the profession. The School of Medicine currently has 4,657 full and part-time faculty. These faculty include those who are based at the School of Medicine, as well as those with clinical appointments who are located in hospitals, clinics and community agencies throughout the region. These faculty will be sufficient to provide a state-of-the-art education for our proposed class of Master of Science in Physician Assistant Studies students.

Many of the faculty members who are based at the School of Medicine are already experienced at presenting graduate-level courses. We have several existing basic science faculty who have been involved in teaching in our many graduate degree programs, including Applied Anatomy, Biochemistry, Bioethics, Environmental Health Sciences, Epidemiology and Biostatistics, Nutrition, Pathology, Physiology and Public Health. Faculty members and departments from throughout the School of Medicine have expressed interest in being involved in this proposed graduate program and in developing new courses to meet the needs of this program.

The School of Medicine also has a robust group of faculty in clinical sciences departments. Our affiliated hospitals have formal clinical departments that house these faculty, who are involved in teaching learners from our medical school and graduate programs. At University Hospitals Case Medical Center, these departments include Anesthesiology and Perioperative Medicine, Dermatology, Emergency Medicine, Family Medicine and Community Health, Medicine, Neurological Surgery, Neurology, Ophthalmology and Visual Sciences, Orthopaedics, Otolaryngology-Head and Neck Surgery, Pathology, Pediatrics, Plastic Surgery, Psychiatry, Radiation Oncology, Radiology, Reproductive Biology (Obstetrics and Gynecology), Surgery, and Urology. At MetroHealth System, departments of Anesthesiology, Dermatology, Emergency Medicine, Family Medicine, Geriatrics, Medicine, Geriatrics, Neurology, Orthopaedics, Otolaryngology-Head and Neck Surgery, Pathology, Pediatrics, Physical Medicine and Rehabilitation, Psychiatry, Radiology, Reproductive Biology (Obstetrics and Gynecology), and Surgery provide many opportunities for implementing the clinical education curriculum. At the Cleveland Clinic Foundation, educational opportunities for clinical training exist in the departments of Anesthesiology, Family Medicine, Medicine, Ophthalmology, Pathology, Pediatrics, Radiology and Surgery. These facilities, along with our many community training sites, will provide more than ample capacity for our proposed program.

As we are in the architectural planning stages for our new School of Medicine building, we have kept the consideration of the needs for the Master of Science in Physician Assistant Studies in mind. Administrative space for the Program Director, Medical Director, new physician assistant faculty, and their supportive staff have already been taken into account. The planned student learning spaces will provide very ample and available space for teaching in full-class lecture, small group teaching, and one-on-one precepting modalities. Student study space has been accounted for in the planning, as have student support facilities, library space, and student fitness needs. Additional space for an education coordinator, and an admissions coordinator have been planned in those areas. Existing staff within The Office of the Vice Dean for Medical Education will provide staff services for student affairs, financial aid and registration.

CWRU School of Medicine was one of the first in the country to have an entirely electronic curriculum. The Master of Science in Physician Assistant Studies will take a similar approach to delivering the curriculum in an electronic manner. Audiovisual needs are provided by the University's Mediavision staff dedicated to the educational needs of all programs in the School of Medicine. Information technology services for the SOM are divided between administrative computing and academic services, and both of these areas report to the Vice Dean for Medical Education. The IT units work closely with the library, the Office of Medical Education, the Vice Dean for Medical Education, the Associate Dean for Student Affairs, and the Registrar's Office. The IT units also work closely with the main campus IT units to ensure that students have the highest quality of Internet access available at all times. Students have access to the university's gigabit wired network at their desks and access to 802.11a/b/g wireless network throughout the SOM.

On the CWRU SOM campus, the Space and Facilities Planning Office (SFPO) is responsible for scheduling all learning spaces under the purview of the Dean. Using room scheduling software, the SFPO reserves the lecture halls, small group learning spaces, and meeting rooms for the Office of Curricular Affairs, who is then responsible for coordinating the specific use of each room based on the semester's curriculum. The anatomy labs are assigned to the Department of Anatomy and room scheduling is coordinated by the Anatomy faculty responsible for teaching the anatomy courses based on class size and schedule. The medium and small group discussion rooms are exclusively assigned to the Vice Dean for Medical Education to utilize as needed for

the curriculum. When not in use for specific curriculum courses, these rooms are utilized by learners as private study spaces.

The SOM has a medical simulation center with 8,500 square feet and 8 separate exam rooms for OSCEs and clinical learning opportunities. The Mount Sinai Skills and Simulation Center (MSSSC) at Case Western Reserve University provides learners from the School of Medicine, including the proposed students in the Master of Science in Physician Assistant Studies program, access to various types of simulation that includes standardized patients, task training, hi-fidelity manikins, virtual reality, second life and hybrid simulation in a safe risk-free learning environment. MSSSC offers technical and human simulation programs that extend across multiple disciplines and professions to allow learners to practice clinical and communication skills. The MSSSC staff assists curriculum leaders and faculty in developing programs and scenarios that support their learning objectives. Technical, Standardized Patient, or hybrid simulation programs can be managed at MSSSC.

The main Health Sciences Library for CWRU is located within the SOM. There are two separate facilities that house all the print material for the health sciences; both are on the CWRU campus. The Library works closely with the other Case Western Reserve University libraries, and with the libraries of the cultural institutions in University Circle surrounding CWRU. The Library is a member of the state-wide consortium of Ohio academic libraries, OhioLINK, and is a Resource Library in the Greater Midwest Region NN/LM. The Library is a full member of OHIONET, and of OCLC. The librarians in the affiliated hospitals have access to all of the CWRU Libraries electronic resources, and are served by interlibrary loan for materials not available electronically. These affiliated hospitals all house their own libraries as well, so learners are well-supported in their information needs.

7. Projected Financial Needs and Adequacy of Expected Financial Support

The School of Medicine administration has committed both budget and space for the proposed PA program. As previously discussed, the needs of the Physician Assistant Program have been

specifically addressed in the design and sizing of the new Medical Education building. That building will be the home base for the program.

The School has committed operating dollars to support the planning and implementation phase of the PA program. These include the hiring a full time Program Director and 60% effort Medical Director by the Fall of 2014. Also, two additional PA faculty will be in place by the time of the accreditation site visit in December 2015. Additional resources have been set aside by the School sufficient to hire an administrative coordinator for admissions and to adequately provide travel and non-salary budgets in the planning and accreditation stages.

Upon program initiation, tuition revenue will provide all the resources needed to pay for faculty, administrative support staff and all non-salary requirements. See summary table below: Full time faculty include the Program Director and two additional physician assistants. Additional teaching faculty positions are budgeted at ~ 2 FTEs in year 1 and ~3 FTEs at steady state. Support staff on board prior to the start of the program will include an admissions coordinator, a program coordinator and an administrative assistant. After the first year, an additional program coordinator and assistant will be hired. All the positions have been budgeted for in the mid-range financial plan of the School.

It is planned that 30 students will matriculate in the first year, growing to 50 students per year by year three. Tuition will be set at CWRU graduate tuition rate in effect at that time. It is fully expected that the first year will be show a modest surplus growing to more substantial annual surpluses as the program matures to steady state.

<i>Physician Assistant Program</i>	Year 1	Steady State
Full Time Faculty	225,000	325,000
Part Time/Teaching Faculty	215,000	340,000
Staff	165,000	265,000
Fringe Benefits	190,575	292,950
Non Salary	<u>100,000</u>	<u>75,000</u>
Total Expense	886,500	1,297,950
Tuition Revenue @ 30 students	1,200,000	
Tuition Revenue @ 100 students		4,000,000

Program Net

304,425

2,702,050

APPENDIX A

**SAMPLE PHYSICIAN ASSISTANT
PROGRAM CURRICULA**

The first 12 months of the program are devoted to preclinical studies, and the remaining 12 months to clinical experiences in primary care and the medical and surgical specialties. All courses are required, no transfer credit is accepted, and no credit is awarded for pre-admission experiential learning. Only full-time students are admitted to the curriculum.

During the second year of the PA Program, students complete 10 rotations. These clinical experiences are composed of eight required and two elective rotations, and a final senior seminar course. Two of these rotations are required to take place in a medically underserved area. Students must successfully complete the end of rotation exam at the conclusion of all required rotations as well as other clinical evaluations throughout the year. Clinical year students will return to campus throughout the second year to participate in Call Back days and evaluation exercises. Laptop computers are leased to each student for both the first and second years. Computers are used for a variety of in-class and clinical assignments and activities, as well as for communication with the program and Internet services.

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Didactic (Preclinical) Year	Anatomy					Fundamentals of Surgery							
	Patient Assessment & Counseling I					Patient Assessment & Counseling II					Patient Assessment & Counseling III		
	Intro to Prevention		Clinical Medicine I			Clinical Medicine II			Clinical Medicine III				
	Basic Medical Science		Diagnostic Methods I			Diagnostic Methods II			Diagnostic Methods III				
	Physiology		Pharmacology I			Pharmacology II			Pharmacology III				
			Practice & the Health System I			Practice & the Health System II							
						Evidence-Based Medicine I							
Clinical Year	Bridge Course	Emergency Medicine	Internal Medicine	Obstetrics & Gynecology	Pediatrics	Primary Care	Behavioral Medicine	General Surgery	Evidence-Based Medicine II	Elective	Elective	Senior Seminar	

The order of rotations will vary from student to student during the Clinical Year.

Semester 1 – Summer B

Gross & Radiographic Anatomy — 4 cr.hrs.

Medical Communications — 2 cr.hrs.

Semester 2 – Fall

Behavioral & Community Medicine I — 1 cr.hr.

Human Physiology — 4 cr.hrs.

Introduction to Medicine I — 6 cr.hrs.

Pharmacotherapeutics — 4 cr.hrs.

Physical Diagnosis — 2 cr.hrs.

Semester 3 – Spring

Behavioral & Community Medicine II — 1 cr.hr.

Clinical Problem Solving/Differential Diagnosis — 1 cr.hr.

Clinical Procedures — 1 cr.hr.

EKG/Lab Medicine – 1 cr.hr.

Introduction to Medicine II — 6 cr.hrs.

Patient Evaluation & Hospital Practicum — 2 cr.hrs.

Semester 4 – Summer A

Advanced Clinical Practicum — 2 cr.hrs.

Evidence-Based Medicine — 3 cr.hrs.

Typical Clinical Schedule Number of Months

Elective — 2

Emergency Medicine — 1

Intensive Care Medicine — 1

Internal Medicine — 1

Internal Medicine Selective — 1

Obstetrics/Gynecology — 1

Pediatrics — 1

Primary Care — 2

Psychiatry — 1

Surgery, General — 1

Clinical Practicum — 12 four-week rotations, 3 credits each = 36 credit hours

Special Topics seminar — 1 credit for each of the four semesters = 4 credit hours

TOTAL CLINICAL YEAR SEMESTER HOURS = 40



Year	Term	Title	Credit Hour
First Year	Summer	MPA 5101 Professional Practice Issues I	1
		HCS 5407 Human Physiology	4
		HCS 5308 Human Anatomy	3
		HCS 5309 Human Anatomy Lab	3
		HCS 5207 Introduction to Human Neuroscience	2
	Fall	MPA 5215 Pharmacology I	2
		MPA 5102 Integration Skills I	1
		MPA 5305 Patient Evaluation I	3
		MPA 5509 Clinical Medicine I	5
		HCS 5306 Introduction to Pathology	3
		HCS 5106 Professional Development (grade in Spring 1)	0
	Spring	MPA 5216 Pharmacology II	2
		MPA 5103 Integration Skills II	1
		MPA 5204 Clinical Prevention and Population Health	2
		MPA 5206 Patient Evaluation II	2
MPA 5510 Clinical Medicine II		5	
MPA 5103 Evidence Based Medicine		1	
HCS 5106 Professional Development		1	
Second Year	Summer	MPA 5231 Psychiatry	2
		MPA 5308 Clinical Skills	2
		MPA 5307 Patient Evaluation III	3
		MPA 5511 Clinical Medicine III	5
Clinical Rotations		MPA 5831 Family Medicine	8 weeks
		MPA 5830 Internal Medicine	8 weeks
		MPA 5622 Obstetrics/Gynecology	6 weeks
		MPA 5623 Pediatrics	6 weeks
		MPA 5433 Surgery	4 weeks
		MPA 5432 Emergency Medicine	4 weeks
		MPA 5430 Psychiatry	4 weeks
		MPA 5450 Infectious Disease	4 weeks
		MPA 5429 Clinical Selective	4 weeks
		MPA 5428 Clinical Elective	4 weeks
		MPA 5350 Professional Practice II	3 weeks
		MPA 5440 Directed Study	4 weeks
TOTAL PROGRAM HOURS			112



SUMMER QUARTER A and B (Total 21)

- Physical Diagnosis (4)
- Physical Diagnosis Lab (3)
- Principles of Professional Practice I (2)
- Introduction to Medical Genetics (2)
- Introduction to Pathophysiology/Mechanisms of Disease (2)
- Introduction to Pharmacotherapeutics (2)
- Gross Anatomy, Imaging and Embryology (2)
- Clinical Medicine I (3)

FALL QUARTER (Total 16)

- Gross Anatomy, Imaging and Embryology (6)
- Clinical Medicine II (4)
- Clinical Medicine Tutorials I (3)
- Principles of Professional Practice II (2)
- Clinical Practicum I (1)

WINTER QUARTER (Total 18)

- Human Physiology (6)
- Clinical Medicine III (4)
- Clinical Medicine Tutorials II (3)
- Principles of Professional Practice III (3)
- Clinical Practicum II (1)
- Electrocardiography (1)

SPRING QUARTER (Total 15)

- Clinical Medicine I (4)
- Clinical Medicine Tutorials III (3)
- Applied Clinical Skills (2)
- Principles of Professional Practice IV (3)
- Clinical Practicum III (1)
- Neuroanatomy (2)

Required Primary Care Clinical Rotations (5 weeks each, total of 42 credits):

- Community Medicine (7)
- Pediatrics (7)
- Women's Health (7)
- Inpatient Medicine (7)
- Emergency Medicine (7)
- General Surgery (7)

Elective Rotations (7 credits each, total of 14 credits) - Determined by student interests, needs and availability. Choice of 2 electives (5 weeks each):

- | | |
|----------------------------|----------------------|
| • Cardiology | • Nephrology |
| • Cardiothoracic Surgery | • Neurosurgery |
| • Dermatology | • Orthopedic Surgery |
| • Developmental Pediatrics | • Otolaryngology |
| • Endocrinology | • Plastic Surgery |
| • Geriatrics | • Psychiatry |

APPENDIX B
PROPOSED SYLLABI BY COURSE

**Case Western Reserve University
Master of Science in Physician Assistant Studies Program
GENE 525 - Clinical Genetics**

Course Title: Clinical Genetics
Course Number: GENE 525
Semester Hours: 2
Semester Taught: Spring I

Description of Course:

This course presents principles used in the genetic approach to evaluating the infant, child and adult with congenital malformations or a genetic syndrome. The course begins with an overview of an approach to the dysmorphic individual and continues with discussions of specific diagnoses, etiologies of malformations or disorders, genetic mechanisms and recurrence risks. Such issues as prognosis and management are also discussed.

Goal of Course:

The goal of this course is to prepare the physician assistant student with the tools to evaluate infants, children and adults for congenital malformations or genetic syndromes.

Teaching Methods Used:

Didactic presentations, class discussions

Required Text:

Reardon W. 2007. *The Bedside Dysmorphologist*. New York, NY: Oxford University Press.

Jones KL, Jones MC, Del Campo M (eds). 2013. *Smith's Recognizable Patterns of Human Malformation*. (7th ed). Philadelphia, PA: Elsevier/Saunders Company.

Nussbaum RL, McInnes RR, Willard HF. 2007. *Thompson & Thompson: Genetics in Medicine*. (7th ed). Philadelphia, PA: W.B. Saunders Company, 2007.

Cassidy SB and Allanson JE (eds). 2010. *Management of Genetic Syndromes*. (3rd ed). Hoboken, NJ: John Wiley & Sons, Inc.

Learning Objectives:

After completion of this course, learners will be able to:

- Describe basic approaches to evaluating an individual with dysmorphic features.
- Discuss approaches to formulating a differential diagnosis.
- List at least three major genetic disorders in each major system.
- Be able to describe the etiology, inheritance pattern, major features of the disorder, current method of diagnosis, prognosis and management for each of the disorders listed in the above objective.
- Discuss specific counseling issues raised for each of the disorders listed in Objective 3 such as recurrence risks, prenatal diagnosis, presymptomatic testing, and psychosocial issues.

**Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 460 - Clinical Procedures**

Course Title: Clinical Procedures
Course Number: CMED 460
Semester Hours: 4 hours
Semester Taught: Summer 2

Description of Course:

The purpose is to prepare these future clinicians for clinical management of health and disease by preparing them for basic clinical procedures

Goal of Course:

Future physician assistants will become valuable members of the health professions team by gaining knowledge and skills in basic clinical procedures.

Teaching Methods Used:

Didactic presentations, laboratory and small group learning sessions

Required Text:

Dehn RW, Asprey DP. 2013. Essential Clinical Procedures, 3rd Edition. Philadelphia, PA: Saunders.

Learning Objectives:

After completion of this course, learners will be able to:

- Demonstrate appropriate measurement of vital signs
- Perform and interpret an electrocardiogram
- Evaluate a chest radiograph interpretation
- Assess the results of ultrasound, CT and MRI
- Perform and interpret a Pulmonary Function testing
- Perform endotracheal intubation
- Perform and assess gram stains
- Demonstrate basic splinting and casting skills
- Display appropriate venipuncture technique
- Display appropriate injection technique
- Executive a urinary tract catheterization

**Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 470 - Culture and Health**

Course Title: Culture and Health
Course Number: CMED 470
Semester Hours: 3 hours
Semester Taught: Summer 2

Description of Course:

Using a biopsychosocial model of health, this course will investigate the impact of culture, beliefs and values on health, wellness, disease and prevention on individuals, patients, families and communities

Goal of Course:

In order to be response to individuals, families and communities, physician assistant students will gain insights and skills in incorporating concepts of culture, beliefs and values into patient care, education and management

Teaching Methods Used:

Didactic presentations, small group projects

Required Text:

Edberg M. 2012. Essentials Of Health, Culture, And Diversity: Understanding People, Reducing Disparities (Essential Public Health). Burlington, MA: Jones & Bartlett Learning.

Learning Objectives:

After completion of this course, learners will be able to:

- Discuss the impact of culture on the definition of health, disease and wellness
- Describe common health risks in selected patient populations.
- Distinguish between the health risks of individual patients, families and communities.
- Identify screening tools for health risks in patients and communities.
- Apply the principles of health promotion and disease prevention to the development of culturally sensitive patient education
- Consider social, cultural and economic issues in patient care

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 421, CMED 422, CMED 423 - Foundations of Clinical Medicine I, II, III

Course Title: Foundations of Clinical Medicine I, II, III
Course Number: CMED 421, CMED 422, CMED 423
Semester Hours: 2 hours per semester
Semester Taught: Summer 1, Fall 1, Spring 1

Description of Course:

This course provides the physician assistant student with the knowledge and clinical skills required for medical history-taking and performance of the complete physical examination. Interviewing skills, focused physical examination techniques and appropriate documentation is presented, with integration of issues of bioethics, patient confidentiality and patient rights.

Goal of Course:

The goal of this course is to provide physician assistant learners with the knowledge and skills to conduct a history and physical examination to prepare them for clinical rotations.

Teaching Methods Used:

Didactic presentations, clinical demonstrations and small group learning sessions

Required Text:

Coulehan JL, Block MR. 2005. The Medical Interview: Mastering Skills for Clinical Practice (Medical Interview). Philadelphia, PA: FA Davis Company.

Learning Objectives:

After completion of this course, learners will be able to:

- Identify the components of a complete medical history.
- Demonstrate interviewing techniques to take a problem specific medical history.
- Discuss culturally sensitive approaches to history-taking and physical examinations.
- Differentiate between normal and abnormal findings encountered during the physical.
- Identify the components of a problem specific physical examination.
- Document problem specific medical histories, problem specific physical examinations, and pertinent verbal presentations.
- Explain the development of differential diagnoses.
- Differentiate among key symptoms and pertinent physical examination findings in the clinical presentation .
- Develop a patient-centered management plan.
- Differentiate between acute and chronic presentations.

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
ANAT 410 - Human Anatomy

Course Title: Human Anatomy
Course Number: ANAT 410
Semester Hours: 6 hours
Semester Taught: Summer I

Description of Course:

Human Anatomy will provide physician assistant students with a sound understanding of the normal human body as a foundation subsequent clinical learning. Gross anatomy, histology, embryology, neuroanatomy and basic physiology plus clinical correlates will be presented.

Goal of Course:

The goal of Human Anatomy is to provide the physician assistant student with the necessary foundation for further foundational basic science and clinical rotations by presenting anatomical concepts of the normal body

Teaching Methods Used:

Didactic presentations, laboratory

Required Text:

Morton DA, Foreman KB, Albertine KH. 2011. Gross Anatomy (1st ed). New York, NY. McGraw Hill Medical.

Mescher AL. 2013. Junquiera's Basic Histology: Text & Atlas (13th ed). New York, NY. McGraw Hill Medical.

Learning Objectives:

After completion of this course, learners will be able to:

- Describe the biology of cells and tissues
- Discuss the anatomy of the back and limbs, with emphasis on the brachial plexus, vertebral column, spinal cord, limbs, gait, and muscle physiology
- Identify anatomy of the head and neck, particularly the brain, brainstem, cranial nerves, pharynx, larynx, eye, and ear
- Describe anatomical concepts relevant to the trunk/thorax/abdomen
- Discuss the anatomy of the heart, lungs, digestive tract and glands, kidneys, and lumbar plexus
- Identify important anatomical concepts of the pelvis and perineum, with focus on the sacral plexus, uterus, ovaries, prostate, urinary bladder, and genitalia

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
BIOC 407 - Introduction to Biochemistry: From Molecules To Medical Science

Course Title: Introduction to Biochemistry: From Molecules To Medical Science
Course Number: BIOC 407
Semester Hours: 4
Semester Taught: Fall I

Description of Course:

This course provides an overview of the macromolecules and small molecules key to all living systems. Topics include: protein structure and function; enzyme mechanisms, kinetics and regulation; membrane structure and function; bioenergetics; hormone action; intermediary metabolism, including pathways and regulation of carbohydrate, lipid, amino acid, and nucleotide biosynthesis and breakdown. The material is presented to build links to human biology and human disease.

Goal of Course:

The goal of this course is to help the physician assistant understand the linkage between human biology and human disease on the macromolecular and small molecular level.

Teaching Methods Used:

Didactic presentation, clinically applicable study problems

Required Text:

Devlin TM. 2010. Textbook of Biochemistry with Clinical Correlations 7th ed. Hoboken, NJ: Wiley-Liss.

Learning Objectives:

After completion of this course, learners will be able to:

- Describe protein structure and function, including amino acids, the peptide bond, protein secondary, tertiary and quaternary structure, protein folding and protein folding diseases, reaction rates; catalysis, kinetics, inhibitors of enzymatic reactions, and catalytic strategies.
- Discuss membranes and signal transduction, including membrane structure-lipids, membrane structure-proteins, membrane transport, and hormone/receptor signaling.
- Interpret energetics and carbohydrate metabolism, including the citric acid cycle, oxidative phosphorylation, glycolysis, allosteric regulation of glycolytic enzymes, glycogen metabolism, the pentose pathway, and metabolism of other sugars.
- Summarize lipids and nitrogen metabolism, including metabolism of amino acids, sulfur-containing amino acids and the one carbon pool, the urea cycle, amino acid fluxes, lipid digestion, transport, and storage, fatty acid degradation, fatty acid synthesis, ketone bodies and phospholipids, sterol and isoprenoid biosynthesis, lipoproteins, and sterol regulation.
- Explain nucleic acids, including metabolism of purines and pyrimidines.

**Case Western Reserve University
Master of Science in Physician Assistant Studies Program
NTRN 365 - Nutrition in Disease**

Course Title: Nutrition in Disease
Course Number: NTRN 365
Semester Hours: 4
Semester Taught: Spring I

Description of Course:

The course addresses the interplay among etiology, metabolic perturbations, pathophysiology, clinical signs and symptoms, and nutrition principles for the prevention and management of disease.

Goal of Course:

The focus of this course is on medical pathophysiologic conditions in which nutrition plays an integral role in development, progression, and resolution - includes prevention, treatment, and/or management; discussion of general and specific/detailed principles, metabolic perturbations, including specific considerations and clinical applications.

Teaching Methods Used:

Didactic presentations, student presentations

Required Text:

Nelms N, Sucher KP, Lacey K, Roth SL. 2011. Nutrition Therapy and Pathophysiology 2nd ed. Pacific Grove, California: Brooks Cole.

Learning Objectives:

After completion of this course, learners will be able to:

- Demonstrate knowledge of relationship between disease etiology and pathophysiology and nutrition.
- Understand established guidelines related to professional clinical practice medical nutrition therapy.
- Describe roles of others with whom the Clinical Nutrition Specialist (or Registered Dietitian –aka RD) collaborates in the delivery of nutrition therapy.
- Develop knowledge of the role of environment, diet, and lifestyle choices as related to disease progression and how dietary interventions affect change and enhance wellness in diverse individuals and groups with different disease states.

- Integrate knowledge of foods and nutrition, physiological and biochemical processes, and economic and psychosocial influences relative to the provision of nutritional care (medical nutrition therapy).
- Interpret and evaluate scientific literature pertinent to clinical nutrition and interventions; includes understanding of information available within Academy of Nutrition and Dietetic's Evidence Analysis Library (aka EAL).
- Translate scientific and medical concepts related to nutrition therapy into terms and explanations appropriate for the lay individual for use in nutrition counseling.
- Demonstrate effective and professional oral and written communication and documentation and use of current information when communicating how diet and disease interact, including diet therapy information with individuals, groups and the public

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 411 - Pharmacology for Physician Assistants

Course Title: Pharmacology for Physician Assistants
Course Number: CMED 411
Semester Hours: 4
Semester Taught: Fall I

Description of Course:

This course is a basic introduction to the principles of pharmacology and to drug classes of particular relevance to the physician assistant. Information concerning drug doses is NOT included. Information concerning calculations used in determining doses WILL BE included

Goal of Course:

This course will provide the physician assistant students with a fundamental knowledge of basic pharmacodynamic, pharmacokinetic and pharmacogenomic principles, as well as the basic properties, mechanisms, uses, adverse effects, and drug-drug reactions of those drugs most relevant to the physician assistant.

Teaching Methods Used:

Lecture, Problem Based Learning, Team Based Learning (TBL)

Required Text:

Golan DE, Tashjian, Armstrong EJ, Armstrong AW. 2011. Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy, 3rd Ed. Philadelphia, PA: Lippincott Williams and Wilkins.

Learning Objectives:

After completion of this course, learners will be able to:

- Prescribe therapeutic agents for the prevention and treatment of diseases
- Demonstrate knowledge of common drugs used in medical situations
- Demonstrate treatment modalities and restoration of health in systemic disease

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 450 - Pharmacotherapeutics

Course Title: Pharmacotherapeutics
Course Number: CMED 450
Semester Hours: 3 hours
Semester Taught: Spring 1

Description of Course:

This course provides the Physician Assistant with foundational knowledge of the therapeutic uses and effects of drugs. The indications, contraindications and adverse effects of prototypical drugs are covered. Drug dependence and addiction are also discussed

Goal of Course:

Learners will gain an understanding of the usage and effects of drugs, as well as the appropriate use of classes of medications

Teaching Methods Used:

Didactic presentations, small group projects

Required Text:

Brunton LL, Chabner, BA, Knollman, BC. 2011. Goodman & Gilman's The Pharmacological Basis of Therapeutics. 12th ed. New York, NY: McGraw-Hill.

Learning Objectives:

After completion of this course, learners will be able to:

- List the indications, mechanisms of actions, adverse effects, drug-drug interactions, and contraindications of drugs.
- Describe the clinically relevant issues of drug therapy
- Discuss the physiology of addiction
- Develop pharmacotherapeutic management plans for selected clinical presentations.

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
PHOL 479 - Physiology of Organ Systems

Course Title: Physiology of Organ Systems
Course Number: PHOL 479
Semester Hours: 4
Semester Taught: Fall I

Description of Course:

The course is arranged on a series of self-learned classes covering classical human physiology plus translational topics. Class time will be spent in active discussion of the assigned readings. There will be no lectures. Students will be given a set of learning objectives prior to each class meeting, and they are expected to master the material thoroughly before class

Goal of Course:

The goal of this course is to give the physician assistant learners a strong foundation in classical human physiology. The focus is on developing lifelong learners with the ability to think critically.

Teaching Methods Used:

Small group learning, facilitated discussion.

Required Text:

Boron WF, Boulpaep EL. 2007. Medical Physiology 2nd ed. Philadelphia, PA: Saunders.

Learning Objectives:

After completion of this course, learners will be able to:

- Discuss neurophysiology, including neurons, synaptic transmission, paraplegia or Alzheimer, the sensory system, the autonomic nervous system, CNS circuits, and the motor system
- Describe muscle physiology, including the structure and function of muscle, Myasthenia gravis and sarcopenia
- Explain cardiovascular physiology, including circulation, the cardiac cycle, electrophysiology, cardiac function, hypertension, hemorrhage, regulation of pressure and flow, control of cardiovascular function, cardiac hypertrophy and fibrillation
- Discuss respiration physiology, including organization and mechanics of ventilation, acid/base regulation, gas transport and diffusion, gas exchange: ventilation and diffusion, and control of breathing

- Describe gastro-intestinal physiology, including motility, gastric function, pancreas and bile function, pancreatitis, chron's disease, digestion and absorption, liver physiology, and alcoholic liver disease
- Explain renal physiology, including glomerular filtration, tubular function/transport, renal insufficiency, glomerulonephritis, and idiopathic hypertension
- Discuss endocrine physiology/metabolism including hypophysis, bone mineral metabolism, pi metabolism and regulation, the thyroid, the adrenal glands, Cushing, growth hormone, the pancreas and diabetes
- Apply concepts of integrative physiology, including nutrition; fast vs. fed, exercise and adaptive responses, and aging and adaptive responses

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 441, CMED 442 - Principles of Clinical Medicine I, II

Course Title: Principles of Clinical Medicine I, II
Course Number: CMED 441, CMED 442
Semester Hours: 3 hours per semester
Semester Taught: Fall 1, Spring 1

Description of Course:

This two-course series takes an organ-based approach to provide foundational content in pathophysiology. This course will discuss but not be limited to the following systems: cardiovascular, respiratory, musculoskeletal, hematology and oncology metabolic/endocrine, gastrointestinal, genitourinary, immune, renal, and neurologic

Goal of Course:

Using an organ-based approach, learners will investigate the clinical foundation in pathophysiology necessary for understanding disease states in clinical care settings.

Teaching Methods Used:

Didactic presentations, small group clinical correlation conferences

Required Text:

Kumar V, Abbas AK, Aster JC. 2014. Robbins & Cotran Pathologic Basis of Disease, 9th edition. Philadelphia, PA: Saunders.

Learning Objectives:

After completion of this course, learners will be able to:

- Describe the pathology and clinical presentation of the following systems:
- Cardiovascular:
- Electrophysiology of the Heart – Arrhythmias and Myopathies
- Physiology of Cardiac Defects Cardiac Function
- Defects in Cardiac Output and Venous Return
- Arterial Pressure and the Circulation Dysfunction
- Issues in Fetal and Neonatal Circulation
- Hemostasis and Injury, Hemorrhage, Shock
- Respiratory
- Mechanical Issues in Pulmonary Function
- Disorders of Alveolar Ventilation
- Pulmonary Circulation and Gas Exchange Pathology

- Problems in Oxygen and Carbon Dioxide Transport
- Dysfunction in Respiratory Control
- Musculoskeletal
- General Principles for Skeletal, Cardiac, and Smooth Muscle
- Disorders of muscular function
- Bone disorders and pathologies
- Rheumatological conditions
- Hematology and oncology
- Hyperplasias and Neoplasms
- Cancer
- Metabolic/Endocrine
- Pituitary Gland Disorders
- Growth Hormone Defects
- Disorders of the Thyroid Gland
- Disruption in Hormonal Regulation
- Adrenal Gland Disorders
- Disorders of Metabolism
- Pancreas Pathology
- Electrolyte Imbalance
- Gastrointestinal
- Dysfunctions of GI Tract, including:
- Salivary Glands
- Esophagus
- Stomach
- Exocrine Pancreas
- Hepatobiliary
- Small Intestine
- Large Intestine
- Issues around Gastrointestinal Motility and Enteric Nervous System
- Genitourinary
- Reproductive Pathophysiology
- Concerns around Pregnancy and Birth
- Dysfunctional Sexual Differentiation
- Immune
- Primary immunological deficiency
- Secondary immunological deficiency
- Humoral immunological deficiency
- Cellular immunological deficiency
- Renal
- Structural Problems of the Kidney and Nephrons

- Problems of Renal Clearance
- Glomerular Filtration Rate and Renal Hemodynamics Dysfunction
- Acid-Base Imbalance
- Hypertension
- Neurologic
- Neuropathophysiology
- Disorders of the:
- Cerebrovascular System
- Somatosensory System
- Visual System
- Smell and Taste
- Auditory System
- Vestibular System
- Autonomic Nervous System
- Descending Control of Movements
- Sensorimotor Integration and Internal Regulation
- Injury of the Spinal Cord
- Sleep Disorders
- Seizures
-

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 431, CMED 432, CMED 433, CMED 434 - Professional Issues for Physician Assistants I, II, III, IV

Course Title: Professional Issues for Physician Assistants I, II, III, IV
Course Number: CMED 431, CMED 432, CMED 433, CMED 434
Semester Hours: 1 hour per semester
Semester Taught: Summer 1, Fall 1, Spring 1, Summer 2

Description of Course:

In this longitudinal, four course series, students will explore the history of the physician assistant profession, the status of the PA in the US healthcare system, and issues and ethics in practice.

Goal of Course:

Learners will understand the Physician Assistant profession, including its development as a health care profession, to its status and role in the current health care environment to current issues and ethical dilemmas in clinical practice

Teaching Methods Used:

These courses will utilize presentations by practitioners and leaders in the health care, small group discussions, and interactions with clinical environments in the community

Required Text:

Cassidy B, Blessing JD. 2008 Ethics and Professionalism: A Guide for the Physician Assistant. Philadelphia, PA: FA Davis Company.

Learning Objectives:

After completion of this course, learners will be able to:

- Describe the important landmarks in the development of the PA profession
- Discuss the role of the PA as a member of the interprofessional healthcare team
- Articulate the dynamics of the relationship between physicians and PAs.
- Explain the roles that PAs serve in the provision of care in underserved areas.
- Describe laws and regulations governing PA practice, licensure, and credentialing.
- List the certification and recertification requirements for licensure and NCCPA.
- Evaluate current issues in the health care and economics that impact the PA.
- Identify ethical issues for the PA in professional practice.
- Discuss issues of professionalism in PA practice.
- Compare approaches commonly utilized to assure patient safety, assess quality improvement, and prevent medical errors.

**Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 480 - Emergency Medicine**

Course Title: Emergency Medicine
Course Number: CMED 480
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week Emergency Medicine course offers the physician assistant learner clinical experience in the care of the urgent and emergent patient. In emergency room settings, learners will provide urgent care, working with patients across the age span, with a variety of undifferentiated presentations.

Goal of Course:

The physician assistant learner will assess, diagnose, monitor, manage, refer and educate the undifferentiated patient who presents to the emergency room in urgent distress.

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Cline D, Ma JO, Cydulka R, Meckler G, Thomas S, Handel D. 2012. Tintinalli's Emergency Medicine Manual 7th ed. New York: McGraw-Hill,

Learning Objectives:

After completion of this course, learners will be able to:

- Discuss the major diagnoses seen in emergency medicine
- Demonstrate procedures used frequently in emergency medicine
- Describe pharmacologic entities unique to emergency medicine
- Demonstrate skills in working with an interprofessional team
- Display skills in case presentations
- Display skills in documentation required in emergency medicine

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 481 - Family Medicine

Course Title: Family Medicine
Course Number: CMED 481
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week Family Medicine course provides the physician assistant learner the opportunity to work with patients across the life span. Acute, chronic, and preventive care will be an integrated part of the care of continuity patients.

Goal of Course:

The physician assistant learner will work with patients from a variety of social, economic, and cultural backgrounds across the lifespan. They will experience continuity of care while assessing, diagnosing, monitoring, managing, referring and educating patients.

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Mengel M, Schwiebert L. Family Medicine: Ambulatory Care and Prevention, 5th Edition. New York, NY. McGraw Hill Medical.

Learning Objectives:

After completion of this course, learners will be able to:

- Describe the pediatric, adult, geriatric and women's health diagnoses commonly seen in family medicine
- Explain care through for the life span for patients in the context of the family unit
- Demonstrate procedures frequently used in family medicine
- Discuss pharmacologic approaches frequently used in family medicine
- Demonstrate skills in working with an interprofessional team
- Display skills in case presentations
- Display skills in documentation required in family medicine

**Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 482 - Geriatrics**

Course Title: Geriatrics
Course Number: CMED 482
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week Geriatrics course provides the physician assistant learner experiences with geriatric patients. These patients will afford the opportunity to provide acute, chronic, and preventive care. Learners will deal with injuries of the older adult, falls and disease prevention, in the context of the aging process.

Goal of Course:

The physician assistant learner will assess, diagnose, monitor, manage, refer and educate older adult patients, with a focus on care for the patient in context of the family and social environment

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Kane RL, Ouslander JG, Abrass IB, Resnick B. 2008. Essentials of Clinical Geriatrics: 6th Edition. New York, NY. McGraw Hill Professional.

Learning Objectives:

After completion of this course, learners will be able to:

- Demonstrate an understanding and knowledge of the major diagnoses seen in geriatrics
- Perform frequently used procedures in geriatrics
- Discuss pharmacologic approaches in geriatrics, particularly around dosage
- Demonstrate skills in working with an interprofessional team
- Display skills in case presentations
- Display skills in documentation required in geriatrics

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 483 - Internal Medicine

Course Title: Internal Medicine
Course Number: CMED 483
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week Internal Medicine course offers the physician assistant learner clinical experience in the care of the adult patient. In both hospital and office settings, learners will provide acute, chronic, and preventive care, working with physicians who subspecialize in components of Internal Medicine.

Goal of Course:

The physician assistant learner will assess, diagnose, monitor, manage, refer, and educate adult patients in inpatient and ambulatory settings, and gain an appreciation for the role of the subspecialist in care of the adult patient.

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Papadakis M, McPhee SJ, Rabow MW. 2014. Current Medical Diagnosis and Treatment. New York, NY. McGraw Hill Medical.

Learning Objectives:

After completion of this course, learners will be able to:

- Demonstrate an understanding and knowledge of the major diagnoses seen in internal medicine
- Perform frequently used procedures in internal medicine
- Discuss pharmacologic approaches in internal medicine
- Demonstrate skills in working with an interprofessional team
- Display skills in case presentations
- Display skills in documentation required in internal medicine

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 484 - Obstetrics and Gynecology

Course Title: Obstetrics and Gynecology
Course Number: CMED 484
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week Obstetrics and Gynecology course offers the physician assistant learner clinical experience in the medical and surgical care of the female patient. In both hospital and office settings, learners will provide acute, chronic, and preventive care, working with physicians who subspecialize in components of Obstetrics and Gynecology, with focus on delivery, postpartum and gynecological surgical care.

Goal of Course:

The physician assistant learner will assess, diagnose, monitor, manage, refer, and educate female patients in inpatient labor and delivery, gynecological surgical and ambulatory settings, and gain an appreciation for the role of the subspecialist in care of the female patient are prepartum and postpartum care and gynecological surgery.

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Beckmann CRR, Herbert W, Laube D, Ling F, Smith R. 2013. Obstetrics and gynecology, 7th edition. Philadelphia, PA: Lippincott Williams and Wilkins.

Learning Objectives:

After completion of this course, learners will be able to:

- Demonstrate an understanding and knowledge of the major diagnoses seen in obstetrics and gynecology
- Perform frequently used procedures in obstetrics and gynecology
- Discuss pharmacologic approaches in obstetrics and gynecology, with emphasis on drugs that are dangerous to pregnant and lactating women
- Demonstrate skills in working with an interprofessional team
- Display skills in case presentations
- Display skills in documentation required in pediatrics

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 485 - Pediatrics

Course Title: Pediatrics
Course Number: CMED 485
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week Pediatrics course offers the physician assistant learner clinical experience in the care of the infant, toddler, child, and adolescent patient. In both hospital and office settings, learners will provide acute, chronic, and preventive care, working with physicians who subspecialize in components of Pediatrics.

Goal of Course:

The physician assistant learner will assess, diagnose, monitor, manage, refer and educate infant, toddler, child, and adolescent patients in inpatient and ambulatory settings, and gain an appreciation for the role of the subspecialist in care of these patients in the context of their family, culture and community.

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Hay W, Levin M, Deterding R, Abzug M. 2014. Current Diagnosis and Treatment Pediatrics, 22nd Edition. New York, NY. McGraw Hill Professional.

Learning Objectives:

After completion of this course, learners will be able to:

- Demonstrate an understanding and knowledge of the major diagnoses seen in pediatrics
- Perform frequently used procedures in pediatrics
- Discuss pharmacologic approaches in pediatrics, with particular emphasis on dosage
- Describe developmental milestones
- Demonstrate skills in working with an interprofessional team
- Display skills in case presentations
- Display skills in documentation required in pediatrics

**Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 486 - Psychiatry**

Course Title: Psychiatry
Course Number: CMED 486
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week Psychiatry course offers the physician assistant learner a four week clinical experience in behavioral health in adolescent and adult patients. While there will be both hospital and office settings, learners will provide acute, chronic, and preventive care primarily in community settings.

Goal of Course:

The physician assistant learner will assess, diagnose, monitor, manage, refer, and educate behavioral health patients in a variety of settings, with a focus on the community. Learners will gain an appreciation for the role of counselling and medication in the care of patients.

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Sadock BJ, Sadock VA. 2007. Kaplan and Sadock's Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry. Philadelphia, PA: Lippincott Williams & Wilkins.

Learning Objectives:

After completion of this course, learners will be able to:

- Demonstrate an understanding and knowledge of the major diagnoses seen in psychiatry
- Perform frequently used procedures in psychiatry
- Discuss pharmacologic approaches in psychiatry
- Demonstrate skills in working with an interprofessional team
- Display skills in case presentations
- Display skills in documentation required in psychiatry

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 487 - Surgery

Course Title: Surgery
Course Number: CMED 487
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week Surgery course offers the physician assistant learner clinical experience in the preoperative and postoperative care of the patient. In both hospital and office settings, learners will provide surgical care, working with physicians who subspecialize in components of Surgery.

Goal of Course:

The physician assistant learner will assess, diagnose, monitor, manage, and refer patients in inpatient and ambulatory settings, and gain an appreciation for the role of the subspecialist in care of the surgical patient.

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Lawrence PF, Bell RM, Dayton MT, Hebert JC. 2012. Essentials of General Surgery. Philadelphia, PA: Lippincott Williams & Wilkins.

Learning Objectives:

After completion of this course, learners will be able to:

- Demonstrate an understanding and knowledge of the major diagnoses seen in surgery
- Perform frequently used procedures in surgery including assisting in the operating room and aseptic technique
- Discuss pharmacologic approaches in general surgery
- Demonstrate skills in working with an interprofessional team
- Display skills in case presentations
- Display skills in documentation required in surgery

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 488 - Primary Care

Course Title: Primary Care
Course Number: CMED 488
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week elective course in general internal medicine, general pediatrics or family medicine offers the physician assistant learner additional clinical experience in continuity management of patients that interest them the most. In ambulatory settings, learners will provide care in a longitudinal fashion to develop their preparation for a career of interest.

Goal of Course:

The physician assistant learner will explore a primary care discipline to a more indepth manner, providing ambulatory care in a discipline that helps them explore areas of medicine for a career choice..

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Dependent on specialty of choice

Learning Objectives:

After completion of this course, learners will be able to:

- Discuss in a more indepth manner the characteristics of a primary care discipline as a career choice
- Describe the advanced care of patients in a primary care discipline
- Provide more advanced, independent care of patients in a primary care discipline
- Demonstrate greater independence in the management of primary care patients

Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 489 - Intensive Care Medicine

Course Title: Intensive Care Medicine
Course Number: CMED 489
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

This four week elective course offers the physician assistant learner clinical experience in intensive care settings in the specialty of their choice. In intensive care settings, learners will provide medical and post-surgical care, working with physicians who care for patients in intensive care.

Goal of Course:

The physician assistant learner will monitor and manage patients in intensive care settings in a specialty of their choosing, and gain an appreciation for the role of the physician assistant in caring for the critically ill hospitalized patient.

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Irwin RS, Lilly C, Rippe JM. 2013. Irwin & Rippe's Manual of Intensive Care Medicine. Philadelphia, PA: Lippincott Williams & Wilkins.

Learning Objectives:

After completion of this course, learners will be able to:

- Demonstrate an understanding and knowledge of the major diagnoses seen in intensive care settings
- Perform frequently used procedures in the intensive care setting
- Discuss pharmacologic approaches to managing patients in intensive care settings
- Demonstrate skills in working with an interprofessional team of hospital-based physician
- Display skills in case presentations
- Display skills in documentation required in intensive care

**Case Western Reserve University
Master of Science in Physician Assistant Studies Program
CMED 490 - Elective of Student's Choosing**

Course Title: Elective of Student's Choosing
Course Number: CMED 490
Semester Hours: 5
Semester Taught: Fall II, Spring II or Summer III

Description of Course:

Dependent on specialty of choice

Goal of Course:

Dependent on specialty of choice

Teaching Methods Used:

Clinical care experiences, didactic presentations, teaching rounds

Required Text:

Dependent on specialty of choice

Learning Objectives:

After completion of this course, learners will be able to:

- Dependent on specialty of choice

Pamela B. Davis, M.D., Ph.D.

Dean

Senior Vice President for Medical Affairs

Office of the Dean

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August 20, 2014

Robert Savinell, PhD
Chair, Faculty Senate
c/o Rebecca Weiss
Secretary of the Faculty Senate
Adelbert Hall

Dear Dr. Savinell:

On behalf of the Faculty of Medicine and for Faculty Senate review, I forward a proposal to establish a MS in Physician Assistant Studies degree program.

The program will take advantage of our faculty and affiliated hospital variety and strengths to prepare graduates to provide high quality health care in Ohio and throughout the country. The program will combine a strong curriculum in basic science studies with clinical opportunities to meet the certification standards of the Accreditation Review Commission on Education for the Physician Assistant. Working as part of inter-professional health care teams under the direction of physicians, PAs will help to address the shortage of health care professionals in Ohio.

The Faculty Council unanimously recommended approval of the proposed program at its June 2014 meeting, after prior review according to established School of Medicine procedures.

I strongly support approval of the program.

Please let me know if I can provide additional information. Thank you.

Sincerely,



Pamela B. Davis, MD, PhD

cc: Dr. Robert Petersen, Chair, Faculty Council 2013-2014
Dr. Mark Aulisio, Chair, Faculty Council 2014-2015
Dr. Patricia Thomas
Dr. Clint Snyder

Dan Anker



SCHOOL OF MEDICINE

CASE WESTERN RESERVE
UNIVERSITY



CASE

CASE WESTERN RESERVE UNIVERSITY

Department of Pathology
Wolstein Research Building 5-126
2103 Cornell Road
Cleveland, OH 44106

MEMORANDUM

TO: Pamela B. Davis, MD, PhD
Dean, School of Medicine

FROM: Robert B. Petersen, PhD 
Chair, Faculty Council

DATE: June 27, 2014

RE: Proposed Master of Science in Physician Assistant Studies

At its June 23, 2014, meeting, the Faculty Council reviewed a proposal, submitted by Dr. Clint Snyder, to establish a Master of Science in Physician Assistant Studies degree program. The proposal had previously been reviewed by an ad hoc committee, constituted as required by Faculty Council practice and chaired by Drs. Adnan Cobanoglu and Martin Snider, and, following revision in response to the ad hoc committee's criticisms, was recommended for approval by the full Faculty Council.

The proposed program, to be based in the Center for Medical Education and offered under the auspices of Vice Dean for Medical Education Dr. Patricia Thomas, addresses the current and future shortage of health care providers in Ohio. It will be Ohio's first such program based at a School of Medicine.

The Faculty Council believes the new program meshes nicely with the school's focus on inter-professional education and draws on faculty and affiliate strengths across the City of Cleveland. We believe that the program will provide rigorous preparation of its graduates for positions in this growing profession.

Following a thorough review and discussion of the proposal, the Faculty Council voted unanimously to recommend approval of the program.

Please review the program, forwarded to you with a copy of this memo by email. We hope you will forward the proposal to the Faculty Senate for their review and approval.

Please let me know if you would like additional information.

cc: Dr. Clint Snyder; Dr. Patricia Thomas; Dr. Paul MacDonald; Dan Anker

Charge to the Committee on Graduate Studies

In the Constitution of the Faculty Senate, Article VI., Section D:

Par. 1. The Committee on Graduate Studies shall consist of the dean of graduate studies, *ex officio*, the associate vice president for research, *ex officio*, nine voting members of the University Faculty elected for overlapping three-year terms, and three graduate student members, ~~and~~ one post-doctoral scholar/fellow ~~elected for one year terms~~, and the professional school senator, elected for one-year terms *ex officio*. The Nominating Committee, in consultation with the dean of graduate studies, shall select nominees for election to the committee on the basis of participation in graduate research and in graduate study and instruction. Such selection shall be broadly representative of graduate disciplines.

Par. 2. The Committee on Graduate Studies shall review and recommend to the Faculty Senate with respect to the academic standards, academic policies, -and degree requirements of all departmental, inter-departmental, inter-divisional constituent faculty, and ad hoc and special programs under the administration of the ~~dean~~ School of Graduate Studies. With respect to graduate degree programs, the Committee on Graduate Studies shall review and make recommendations to the Faculty Senate on individual interdisciplinary degree proposals, new degree programs, joint/dual degree programs, as well as changes in degree program name or delivery mode. Graduate degree program refers to any course of study that constitutes a specialization or concentration and leads to recognition or an award for completion of a prescribed course of study beyond the baccalaureate diploma with the exception of the degrees of Doctor of Medicine, Doctor of Dental Medicine and Doctor of Jurisprudence. The committee also reviews and makes recommendation to the Faculty Senate with respect to graduate certificate programs at Case Western Reserve University.

Par. 3. The Committee on Graduate Studies will provide oversight and guidance for academic and policy issues for postdoctoral scholars and fellows.

Sec. E. Committee on Undergraduate Education

Par. 1. Definition of Undergraduate Program Faculty (UPF)

The undergraduate program faculty or UPF are defined as voting members of the University Faculty who have a primary or joint appointment in one or more of the following constituent faculties or departments:

- o College of Arts and Sciences
- o Case School of Engineering
- o Frances Payne Bolton School of Nursing
- o Weatherhead School of Management
- o Department of Physical Education and Athletics
- o Departments in the School of Medicine that offer undergraduate majors

Par. 2 (a) The Committee on Undergraduate Education shall consist of:

(1) ~~the following voting members~~ the following members who shall have a vote on matters considered by the committee:

- the provost, *ex officio*,
- three voting members of the University Faculty elected by the Faculty Senate for overlapping three-year terms;
- one representative each from the College of Arts & Sciences, the Case School of Engineering, the Frances Payne Bolton School of Nursing, and the Weatherhead School of Management appointed by the executive committee/faculty council of each of these four constituent faculties;
- one voting member of the University Faculty from the Department of Physical Education and Athletics;
- one voting member from the University Faculty from the Departments in the School of Medicine that offer undergraduate majors;
- two undergraduate students selected by the Undergraduate Student Government for a one-year term;

(2) Up to four non-voting members, designated by the provost from among members of the administration with the rank of deputy, vice or associate-provost, vice-president, or dean and having specific responsibility for undergraduate education and life. (~~Hereinafter, voting members of the University Faculty who have a primary or joint appointment in at least one of these four constituent faculties, or in the Department of Physical Education and Athletics, or in one of the Departments in the School of Medicine that offer undergraduate majors are collectively referred to as the “Undergraduate Program Faculty”, or “UPF”.~~)

The Faculty Senate Executive Committee shall appoint a chair and vice chair from the voting members of the Undergraduate Program Faculty who are members of the Committee on Undergraduate Education, with either the chair or the vice chair assuming the role of chair in the subsequent year, assisted by the vice chair appointed in that year.

~~Par. 2. (a) The Undergraduate Program Faculty is responsible for the basic policies that govern undergraduate education at the Case Western Reserve University.~~ Par. 32. (a) The Committee on Undergraduate Education shall review and recommend to the Faculty Senate with respect to:

- changes in standards of admission for undergraduate students;
- changes in academic requirements and regulations for undergraduate students;

- curricula, contents, and standards for newly-proposed undergraduate degree programs¹;
- changes in existing undergraduate curricula and degree programs within a constituent faculty that specifically influence undergraduate degree programs or students enrolled in undergraduate degree programs in other constituent faculties (the [provost](#) or the provost's designee, in consultation with the chair of the Committee on Undergraduate Education, will decide which course action forms require review by the committee);
- resource allocations for undergraduate education;
- outcome assessment of undergraduate degree programs ~~and teaching~~ (added by FSCUE-deleted by [FS Executive Committee 10-3-14](#));
- the discontinuance of existing undergraduate degree programs;
- standards for undergraduate academic standing;
- standards for receipt and retention of ~~merit-based undergraduate financial aid~~ [undergraduate scholarships and financial aid](#)
- standards of undergraduate academic integrity and student conduct;
- standards and facilities for undergraduate research and scholarship;
- conditions of undergraduate student life.

The Committee on Undergraduate Education shall be responsible:

- for the interpretation of existing policies and the application of existing academic rules to decide cases that involve academic probation, separation, and readmission;
- to review and to decide upon applications for undergraduate admission to the University;
- to decide cases of receipt and retention of ~~merit-based undergraduate financial aid~~ [undergraduate scholarships](#)
- to report its actions to the Faculty Senate as well as the appropriate administrative offices.

The Committee on Undergraduate Education shall receive regular reports from the executive or other governing committees of the constituent faculties, departments, or programs of the UPF that involve matters of undergraduate education not within the charge of the Committee on Undergraduate Education and as a matter of communication transmit them to the Faculty Senate as well as the appropriate administrative offices. The Committee on Undergraduate Education shall be empowered to form subcommittees as it judges appropriate to discharge its duties and to appoint to these subcommittees voting members of the University Faculty, staff members from administrative units that serve the undergraduate mission, and undergraduate students.

(b) The Undergraduate Program Faculty is responsible for the administration of all undergraduate programs at the University. All proposals for undergraduate courses and programs must be submitted for appropriate review through at least one of the four UPF Constituent Faculties, ~~or another department or unit that is part of the UPF, following procedures developed by the Faculty Senate Committee on Undergraduate Education.~~ [Such procedures shall be subject to approval by the Faculty Senate or the Faculty Senate Executive Committee as appropriate.](#)

Par. ~~43~~. (a) When issues arise that in the judgment of the Chair or a majority of the members of the Committee on Undergraduate Education, or of the Chair of the Faculty Senate involve important basic policies that govern undergraduate education at the University and extend beyond degree programs in a constituent faculty, the Committee on Undergraduate Education may refer proposals for action to a meeting of the Undergraduate Program Faculty for discussion. After that meeting, eligible faculty members in those

¹ [Degree programs are the major and minor academic programs that are officially recognized by the Office of Undergraduate Studies and appear on an official academic transcript of a student.](#)

faculties, departments, or programs shall vote on proposals by electronic ballot. The result of that vote shall be conveyed to the Faculty Senate for action at its next meeting after the vote.

(b) Meetings of the Undergraduate Program Faculty defined in Par. ~~3(a)~~1 to consider proposals for action regarding issues that involve important basic policies that govern undergraduate education at the University and extend beyond degree programs in a constituent faculty may also be called by the president, by the provost, by the chair of Committee on Undergraduate Education, by the chair of the Faculty Senate, or upon written petition, stating the proposal for action at the meeting and signed by not less than 10 (ten) percent of the total number of eligible voting members of the UPF. Such a petition shall be delivered to the chair of the Committee on Undergraduate Education, who shall certify the signatures to the Committee. The Committee on Undergraduate Education shall specify a meeting date upon receipt of the Petition, such meeting to take place no later than 30 (thirty) calendar days after receipt of the petition.

(c) The president, or in the absence of the president, the provost, or in the absence of the provost, the chair of the Committee on Undergraduate Education, shall preside at all meetings of the Undergraduate Program Faculty defined in Par. ~~3(a)~~1

Par. ~~5~~4. In discharging its responsibilities, the Committee on Undergraduate Education shall observe university policies governing academic freedom.

Gender Affirmation Coverage

- Effective 1/1/2015
- Anthem, MMO options
- Covered services to include:
 - Surgery
 - Hormone therapy
 - Behavioral health
- Excluded services to include:
 - Cosmetic procedures

Coverage Details Pending

- Confirming in-network providers at Anthem, MMO
- Defining cosmetic vs medically necessary procedures

Whereas science is a basis of our modern technological society and economy;

and

Whereas a scientifically educated citizenry is critical to the future of this State of Ohio and of these United States of America;

and

Whereas scientific thinking and scientific processes are at the core of science;

and

Whereas those scientific processes revolve around the testing of scientific theories through the comparison of their predictions with data, leading to the rejection or modification of those theories or to increased confidence in and consensus on their correctness; and scientific theories, such as Relativity, or Evolution, or Anthropogenic Climate Change, that have achieved a high level of confidence and consensus among scientists generally continue to be called theories, in contrast with common usage, and in acknowledgement that they may one day confront contradictory data requiring their rejection, modification or extension;

and

Whereas theories that cannot be subjected to this process of prediction and comparison with data are generally regarded by scientists as unscientific;

and

Whereas neither political nor religious arguments may therefore enter into the scientific formulation or evaluation of scientific theories;

and

Whereas science education that omits the teaching of scientific thinking and scientific processes in favor exclusively of scientific facts, or that encourages or allows the misrepresentation of unscientific theories as scientific alternatives, fails to prepare students for higher education in science, for informed engagement in our society, or for active participation in many aspects of the current and future economy;

and

Whereas the bill has been represented by some proponents as allowing school districts to incorporate non-scientific perspectives, including faith-based perspectives, into the teaching of scientific subjects;

and

Whereas the Common Core State Standards Initiative academic content standards, previously adopted by the Ohio State Board of Education, and the Next Generation Science Standards, for which Ohio served as a Lead State Partner, were developed through an evidence-based bipartisan multi-state process developed and led by the nation's governors and education commissioners through their representatives;

and

Whereas the state board of education exercises under the acts of the general assembly general supervision of the system of public education in the State of Ohio and should therefore be required and expected to ensure that that system's students are provided with the highest possible quality of education, including science education;

Therefore be it resolved that the Faculty Senate of Case Western Reserve University

- a) Strongly opposes the provisions of Ohio House Bill 597 repealing and replacing the Common Core State Standards Initiative academic content standards with standards legislated by fiat or developed through any process that fails to meet the same high standards as the Common Core;
- b) Rejects explicitly the bill's premise that students should "focus on academic and scientific knowledge rather than scientific processes;"
- c) Rejects the notion that non-scientific perspectives, such as faith-based theories, have a place in the teaching of science;
- d) Calls on the Ohio House, Senate and Governor to reject the proposed bill;
- e) Calls on the Ohio House, Senate and Governor to maintain and strengthen our commitment to prepare Ohio to be scientifically literate citizens equipped with knowledge and skills for the 21st century workforce and higher education,