



IUPUI

**SCHOOL OF INFORMATICS
AND COMPUTING**

DEPARTMENT OF HUMAN-CENTERED COMPUTING

Indiana University-Purdue University
Indianapolis

**NEWM N585
Experiential Innovation II – Living Laboratory**

Department of Human-Centered Computing
Indiana University School of Informatics and Computing, Indianapolis
Spring 2019

Section No.: XXXX

Credit Hours: 3

Time: 6:00pm -8:40pm

Location: IT 270, Informatics & Communications Technology Complex
535 West Michigan Street, Indianapolis, IN 46202 [\[map\]](#)

First Class:

Website: <https://canvas.iu.edu/>

Instructor: Guy Mascaro, Media Arts and Science program

Office Hours: By appointment only

Office: IT 270, 535 W. Michigan Street, Indianapolis, IN 46202 [\[map\]](#)

Phone: (317) 702-5440

Email: gmascaro@iupui.edu, preferred guy.mascaro@hodeitech.com

Website: <https://soic.iupui.edu/people/guy-mascaro/>

Prerequisites: None

COURSE DESCRIPTION

The emergence of artificial, assisted and virtual reality wearable technologies has ushered in the opportunity to advance the use of telepresence to improve training and communication in the business enterprise space. This course will explore real-world usage, opportunities, challenges and lessons learned by Fortune 500 companies in their efforts to deploy cutting edge AR, VR and MR wearable technologies to address pressing business operational issues. We will cover the entire process from proof-of-concept, to development, to piloting, to deployment and full implementation of cutting-edge wearable telepresence technologies.

Required Readings (Sample list):

An empirical study of the effectiveness of telepresence as a business meeting mode (Article Supplied)
 Inf Technol Manag (2016) 17:323-339

By Willem Standaert, Steve Muylle, Amit Basu

“Wait, Can You Move the Robot?”: Examining Telepresence Robot Use in Collaborative Teams (Article Supplied)

HRI’18, March 5-18, 2018, Chicago, IL, USA

By Brett Stoll, et al.

Enhancing Brand Equity Through Flow and Telepresence: A Comparison of 2D and 3D Virtual Worlds (Article Supplied)

MIS Quarterly Vol 35 No. 33pp. 731-747/September 2011

By Fiona Fui-Hoon Nah, Brenda Eschenbrenner and David DeWester

HOLOSUITE AN Exploration into Interactive Holographic Telepresence – Selected pages (Document Supplied)

By Eralm Drehaj, MS, Massachusetts Institute of Technology.

Telepresence Technology for Production: From Manual to Automated Assembly (Article Supplied)
EuroHaptics 2010, Part I, LNCS 6191, pp. 2560261

By A.M.L Kappers et al. (Eds.)

Teaching and Learning Methods

- Develop a working understanding of telepresence in the modern era through lecture and self-discovery
- Explore the current and potential application of AR, VR and MR as tools for telepresence
- Review real-life case studies and applications for telepresence in the Enterprise environment
- Interpret course learnings into a theoretical unique application of telepresence in the Enterprise environment
- Present your unique application for telepresence to the class for feedback/critique
- Objectively provide other classmates with honest and constructive feedback on their application presentation.

Course Objectives:

- Engage in high-level analytical and conceptual thinking
- Understand the methodology to determine the opportunities and effective implementation of an AR, VR or MR telepresence solution within the Enterprise environment
- Demonstrate the ability to concept, execute and deliver a unique telepresence application for deployment in an Enterprise environment
- Create an effective way to work with others to evaluate and test the feasibility of your AR, VR or MR telepresence solutions to address a true Enterprise level need
- Hone a plan of action for developing your concept application into a viable telepresence solution to solve real-world challenges within the Enterprise environment

Core Competencies:

The core competencies of this course include:

- Demonstrate the ability to think analytically and entrepreneurially
- Demonstrate proven project management skills
- Demonstrate the understanding of concepting and developing a telepresence application

Learning Outcomes:

Upon completion of this course, the student will	RBT*	PGPL	Assessment
1. Engage in high-level analytical and conceptual thinking in developing a “Proof of Concept” (POC) for a telepresence application to address a “real-world” need within the Enterprise environment	5. Evaluate 6. Create	K&S CT EC	Project and Presentation
2. Examine published literature	5. Evaluate	CT	Literature Review
3. Observe examples of real-life case studies and expert experiences in POC development, piloting and full implementation of telepresence solutions within the Enterprise environment	5. Evaluate	K&S CT	Identify, Determine, and Plan Designs using a Backwards Design Model
4. Engage in hands-on activities relatable to “real-world” POC development and testing	2. Understand 3. Apply 5. Evaluate	CT K&S	Demonstrate the ability to put learned methods into action
5. Present and effectively defend a POC telepresence application.	4. Analyze 5. Evaluate	K&S CT EC	Project and Evaluation

*RBT: Revised Bloom’s Taxonomy

Principles of Graduate and Professional Learning (PGPL)

Learning outcomes are assessed in the following areas:

1. Knowledge and skills mastery (K&S)
2. Critical thinking and good judgment (CT)
3. Effective communication (EC)
4. Ethical behavior (EB)

Grade Breakdown:

Attendance	40 points
Participation: Class Discussions	60 points
Quizzes (10)	200 points
Assessments (3)	30 points
POC Presentation	100 points
Telepresence Research Paper	100 points
Evaluation	70 points
<i>Total Possible:</i>	<i>600 points</i>

Grading Scale:

A = 540 – 600	Excellent or very good achievement and quality of work
B = 480 – 539	Satisfactory achievement and quality of work
F = 0 – 479	Failure

Credit will not be given toward major, minor, or certificate requirements with a grade below B–

COURSE INFORMATION

This course explores a variety of relevant topics in terms of develop implementing wearable telepresence solutions within the Enterprise environment, including:

- Concepts in Telepresence
- AR, VR, MR Wearable Technology
- Proof-of-Concept Solution Development & Testing
- Enterprise Wearable Opportunities
- Current Experiences from Fortune 500 Companies
- Challenges & Cultural Considerations
- Successful Pilot & Full-Scale Deployment Considerations

Weekly Schedule (Subject to Change)

Date	Class Topic	Reading Assignments/Lecture Handouts
Week 1 1-7	<ul style="list-style-type: none"> • Student/Instructor introductions • Class introduction and course management • Syllabus • Student Reviews: Identify Areas for Telepresence POC for Semester Long Project Presentation and Research Paper • Lecture: Objectives and Expectations & Introduction to Telepresence • Lecture: Boost Your Wearable IQ! Seven Ways Emerging Technologies Humanize and Elevate Performance 	Access to all reading assignments will be granted on the first day of the course
Week 2 1-14	<ul style="list-style-type: none"> • Assignment Quiz • Class Discussion (Reading/Video Assignment) • Lecture: Challenges: Technical & Cultural • Lecture: Preparing for AR+VR & Wearables: A Roadmap for Successful Integration 	<ul style="list-style-type: none"> • Read 1: Telepresence: Virtual Reality in the Real World (Article Supplied) • Video Review 1: Actionable Haptics For Immersive Experiences • Video Review 2: The Connected Worker in the Factory of the Future
Week 3 1-21	<ul style="list-style-type: none"> • MLK Holiday (NO CLASS) 	<ul style="list-style-type: none"> • Read 2: An empirical study of the effectiveness of telepresence as a business meeting mode (Article Supplied) • Video Review 3: Virtually Informed Decision-Making Optimization: Improving Design, Construction, Operations, Safety and Awareness Through VRVideo • Video Review 4: Transforming Automotive Tech Support through Augmented Reality
Week 4 1-28	<ul style="list-style-type: none"> • Assignment Quiz (Week 3 & 4 Reading/Video Assignments) • Class Discussion (Reading/Video Assignments) • Lecture: Challenges: Technical & Cultural • Presentation (Assignment 1 Due – Telepresence Concept) 	<ul style="list-style-type: none"> • Read 3: “Wait, Can You Move the Robot?”: Examining Telepresence Robot Use in Collaborative Teams (Article Supplied) • Video Review 5: VR Training in the Enterprise

	<ul style="list-style-type: none"> • Open Project Discussion 	<ul style="list-style-type: none"> • Video Review 6: How retailers can leverage AR in the stores of the future
Week 5 2-4	<ul style="list-style-type: none"> • Assignment Quiz • Class Discussion (Reading/Video Assignments) • Lecture: From Toy to Tool. Making a Business case for AR and VR at Cummins • Lecture: Industry 4.0 and The Connected Workforce • Guest Speaker– Mel Chua, Google. 	<ul style="list-style-type: none"> • Read 4: Telepresence Robots Break Down Barriers for Those with Physical Disabilities • Video Review 7: Optimizing Human Performance Improvements at the Intersection Between AR, Learning and Guidance • Video Review 8: How AR is Solving Enterprise Challenges •
Week 6 2-11	<ul style="list-style-type: none"> • Assignment Quiz • Class Discussion (Reading/Video Assignments) • Lecture: Software Considerations • Lecture: Smart Glasses: AR, VR, and MR – Head-Worn Devices in the Enterprise • Presentation (Assignment 2 Due – Telepresence Plan) 	<ul style="list-style-type: none"> • Read 5: “Wait, Can You Move the Robot?”: Examining Telepresence Robot Use in Collaborative Teams (Article Supplied) • Video Review 9: Large-Scale EPFC Applications of AR-VR • Video Review 10: Unlocking the Potential of Augmented & Virtual Reality in Supply Chain •
Week 7 2-18	<ul style="list-style-type: none"> • Assignment Quiz • Class Discussion (Reading/Video Assignments) • Lecture: Below the Neck: Body and Wrist-worn Devices in the Enterprise • Guest Speaker – Jason Sagstetter, FB Fuller • Lab/Work Day 	<ul style="list-style-type: none"> • Read 6: Telepresence Technology for Production: From Manual to Automated Assembly (Article Supplied) • Video Review 11: Wearables – Industrial Application Through the Lens of Early Adopters • Video Review 12: That’s Cool, Now What? Democratizing AR-VR Use Within the World’s Largest Architecture Firm
Week 8 2-25	<ul style="list-style-type: none"> • Assignment Quiz • Class Discussion (Reading/Video Assignments) • Lecture: Hardware Considerations • Presentation (Assignment 3 Due – Telepresence Plan Revisions) • Continue to work on your projects (Students will work independent of instructor) 	<ul style="list-style-type: none"> • Read 7: Announcing Teleportal—the XR Telepresence Platform • Video Review 13: Wearables & Emerging Technologies Accelerating Digital Transformation at GE • Video Review 14: Airbus takes digital transformation to the next level with Ubimax Frontline •
Week 9 3-4	<ul style="list-style-type: none"> • Assignment Quiz • Class Discussion (Reading/Video Assignments) • Lecture: Fulfilling the Potential of AR for Enterprise • Lab/Work Day • Guest Speaker – Jeffery Friedman, EWTS 	<ul style="list-style-type: none"> • Read 8: From virtual reality to ‘telepresence’: why Oculus Rift is bigger than we think. • Video Review 15: Mixed-Reality (MR) Meets Pharmaceutical Research & Development • Video Review 16: Virtual Reality for Manufacturing – Steps to Injury Prevention
Week 10 3-11	<ul style="list-style-type: none"> • Spring Break 	
	<ul style="list-style-type: none"> • Assignment Quiz 	<ul style="list-style-type: none"> • Read 9: ORIGIBOT2, the Gripper-

Week 11 3-18	<ul style="list-style-type: none"> • Class Discussion (Reading/Video Assignments) • Lecture: Smart Glasses in Enterprise – What It Takes for Successful Deployments • Lecture: From the Lab to Production: The Scaling Journey of Industrial Augmented Reality (Newport News Ship Building) • Lab/Work Day (Students will work independent of instructor) 	<p>Equipped Telepresence Robot, Launches on Indiegogo</p> <ul style="list-style-type: none"> • Video Review 15: Driving the UPS Smart Logistics Network • Video Review 16: Incubating Visual Overlay Ideas into Project Solutions – A Path Forward (Bechtel Innovate)
Week 12 3-25	<ul style="list-style-type: none"> • Assignment Quiz • Class Discussion (Reading Assignment) • Lecture: (Case Study – Pfizer’s Journey to Enterprise Wearables) • Lecture: (Case Study) Empowering Employees Though Exosuits: How Sci-Fi Narrative & Soft Robotics are Helping Lowe’s Employees • Lab/Work Day (Students will work independent of instructor) 	<ul style="list-style-type: none"> • Read 10: HOLOSUITE AN Exploration into Interactive Holographic Telepresence – Selected pages (Document Supplied)
Week 13 4-1	<ul style="list-style-type: none"> • Research Paper Discussion • Lab/Work Day (Students will work independent of instructor) 	
Week 14 4-8	<ul style="list-style-type: none"> • Research Paper Initial Review • Lab/Work Day (Students will work independent of instructor) 	
Week 15 4-15	<ul style="list-style-type: none"> • Lab/Work Day (Students will work independent of instructor) 	
Week 16 4-22	<ul style="list-style-type: none"> • Research Papers Due (email to instructor) • Lab/Work Day (Students will work independent of instructor) 	
4/29	<ul style="list-style-type: none"> • Presentation/Evaluations • Guest Evaluator Introductions 	

EXPECTATIONS, GUIDELINES, AND POLICIES

Attendance:

A basic requirement of this course is that you will participate in all class meetings, whether online or face-to-face, and conscientiously complete all required course activities and assignments. Class attendance is required for classroom-based courses. It entails being present and attentive for the entire class period. Attendance shall be taken in every class. If you do not sign the attendance sheet while in class, you shall be marked absent. Signing the attendance sheet for another student is prohibited. The instructor is required to submit to the Registrar a record of student attendance, and action shall be taken if the record conveys a trend of absenteeism. Only the following are acceptable excuses for absences: death in the immediate family (e.g. mother, father, spouse, child, or sibling), hospitalization or serious illness; jury duty; court ordered summons; religious holiday; university/school coordinated athletic or scholastic

activities; an unanticipated event that would cause attendance to result in substantial hardship to one's self or immediate family. Absences must be explained with the submission of appropriate documentation to the satisfaction of the instructor, who will decide whether missed work may be made up. Absences that do not satisfy the above criteria are considered unexcused. To protect your privacy, doctor's excuses should exclude the nature of the condition and focus instead on how the condition impacts your attendance and academic performance.

Missing class reduces your grade through the following grade reduction policy: You are allowed two excused or unexcused absences. Each additional absence, unless excused, results in a 5% reduction in your final course grade. More than four absences result in an F in the course.

Missing class may also reduce your grade by eliminating opportunities for class participation. For all absences, the student is responsible for all covered materials and assignments.

Incomplete:

The instructor may assign an Incomplete (I) grade only if at least 75% of the required coursework has been completed at passing quality and holding you to previously established time limits would result in unjust hardship to you. All unfinished work must be completed by the date set by the instructor. Left unchanged, an Incomplete automatically becomes an F after one year. <http://registrar.iupui.edu/incomp.html>

Deliverables:

You are responsible for completing each deliverable (e.g., assignment, quiz) by its deadline and submitting it by the specified method. Deadlines are outlined in the syllabus or in supplementary documents accessible through Canvas. Should you miss a class, you are still responsible for completing the deliverable and for finding out what was covered in class, including any new or modified deliverable. In fairness to the instructor and students who completed their work on time, a grade on a deliverable shall be reduced 10%, if it is submitted late and a further 10% for each 24-hour period it is submitted after the deadline.

CODE OF CONDUCT

All students should aspire to the highest standards of academic integrity. Using another student's work on an assignment, cheating on a test, not quoting or citing references correctly, or any other form of dishonesty or plagiarism shall result in a grade of zero on the item and possibly an F in the course. Incidences of academic misconduct shall be referred to the Department Chair and repeated violations shall result in dismissal from the program.

All students are responsible for reading, understanding, and applying the *Code of Student Rights, Responsibilities and Conduct* and in particular the section on academic misconduct. Refer to *The Code > Responsibilities > Academic Misconduct* at <http://www.indiana.edu/~code/>. All students must also successfully complete the Indiana University Department of Education "How to Recognize Plagiarism" Tutorial and Test. <https://www.indiana.edu/~istd> You must document the difference between your writing and that of others. Use quotation marks in addition to a citation, page number, and reference whenever writing someone else's words (e.g., following the *Publication Manual of the American Psychological Association*). To detect plagiarism instructors apply a range of methods, including Turnitin.com. <http://www.ulib.iupui.edu/libinfo/turnitin>

Academic Misconduct:

1. **Cheating:** Cheating is an attempt to use or provide unauthorized assistance, materials, information, or study aids in any form and in any academic exercise or environment.
 - a. A student must not use external assistance on any “in-class” or “take-home” examination, unless the instructor specifically has authorized external assistance. This prohibition includes, but is not limited to, the use of tutors, books, notes, calculators, computers, and wireless communication devices.
 - b. A student must not use another person as a substitute in the taking of an examination or quiz, nor allow other persons to conduct research or to prepare work, without advanced authorization from the instructor to whom the work is being submitted.
 - c. A student must not use materials from a commercial term paper company, files of papers prepared by other persons, or submit documents found on the Internet.
 - d. A student must not collaborate with other persons on a particular project and submit a copy of a written report that is represented explicitly or implicitly as the student’s individual work.
 - e. A student must not use any unauthorized assistance in a laboratory, at a computer terminal, or on fieldwork.
 - f. A student must not steal examinations or other course materials, including but not limited to, physical copies and photographic or electronic images.
 - g. A student must not submit substantial portions of the same academic work for credit or honors more than once without permission of the instructor or program to whom the work is being submitted.
 - h. A student must not, without authorization, alter a grade or score in any way, nor alter answers on a returned exam or assignment for credit.
2. **Fabrication:** A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citation to the sources of information.
3. **Plagiarism:** Plagiarism is defined as presenting someone else’s work, including the work of other students, as one’s own. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged, unless the information is common knowledge. What is considered “common knowledge” may differ from course to course.
 - a. A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.
 - b. A student must give credit to the originality of others and acknowledge indebtedness whenever:
 1. directly quoting another person’s actual words, whether oral or written;
 2. using another person’s ideas, opinions, or theories;
 3. paraphrasing the words, ideas, opinions, or theories of others, whether oral or written;
 4. borrowing facts, statistics, or illustrative material; or
 5. offering materials assembled or collected by others in the form of projects or collections without acknowledgment
4. **Interference:** A student must not steal, change, destroy, or impede another student’s work, nor should the student unjustly attempt, through a bribe, a promise of favors or threats, to affect any student’s grade or the evaluation of academic performance. Impeding another student’s work includes, but is not limited to, the theft, defacement, or mutilation of resources to deprive others of the information they contain.

5. **Violation of Course Rules:** A student must not violate course rules established by a department, the course syllabus, verbal or written instructions, or the course materials that are rationally related to the content of the course or to the enhancement of the learning process in the course.
6. **Facilitating Academic Dishonesty:** A student must not intentionally or knowingly help or attempt to help another student to commit an act of academic misconduct, nor allow another student to use his or her work or resources to commit an act of misconduct.

OTHER POLICIES

1. **Administrative withdrawal:** Students must participate in all class discussions and conscientiously complete all required course activities and/or assignments. If a student is unable to attend, participate in, or complete an assignment on time, the student must inform the instructor. If a student misses more than half of the required activities within the first 25% of the course without contacting the instructor, the student may be administratively withdrawn from this course. Administrative withdrawal may have academic, financial, and financial aid implications. Administrative withdrawal occurs after the full refund period, and a student who has been administratively withdrawn is ineligible for a tuition refund.
2. **Civility:** To maintain an effective and inclusive learning environment, it is important to be an attentive and respectful participant in lectures, discussions, group work, and other classroom exercises. Thus, unnecessary disruptions should be avoided, such as ringing cell phones, engagement in private conversations, and other unrelated activities. Cell phones, media players, or any noisy devices should be turned off during a class. Texting, web surfing, and posting to social media are generally not permitted. Laptop use may be permitted if it is used for taking notes or conducting class activities. Students should check with the instructor about permissible devices in class. IUPUI nurtures and promotes “a campus climate that seeks, values, and cultivates diversity in all of its forms and that provides conditions necessary for all campus community members to feel welcomed, supported, included, and valued” (IUPUI Strategic Initiative 9). IUPUI prohibits “discrimination against anyone for reasons of race, color, religion, national origin, sex, sexual orientation, marital status, age, disability, or veteran status” (Office of Equal Opportunity). Profanity or derogatory comments about the instructor, fellow students, invited speakers or other classroom visitors, or any members of the campus community shall not be tolerated. A violation of this rule shall result in a warning and, if the offense continues, possible disciplinary action.
3. **Communication:** For classroom-based courses, the instructor or teaching assistant should respond to emails by the end of the next class or, for online courses, within two Indiana University working days, which excludes weekends and holidays. The instructor should provide weekly office hours or accept appointments for face-to-face, telephone, or teleconferenced meetings, and announce periods of extended absence in advance.
4. **Counseling and Psychological Services (CAPS):** Students seeking counseling or other psychological services should contact the CAPS office at 274-2548 or capsindy@iupui.edu. For more information visit <http://life.iupui.edu/caps/>.
5. **Course evaluations:** Course evaluations provide vital information for improving the quality of courses and programs. Students are urged to complete one course and instructor evaluation for each section in which they are enrolled at the School of Informatics and Computing with

the following exceptions: (a) The student has withdrawn from the course; (b) fewer than five students are enrolled in the section (in which case maintaining anonymity is difficult); and (c) the section is a laboratory that must be taken with a course having a different section number. Course evaluations are completed at <https://soic.iupui.edu/app/course-eval/>. Course evaluations are typically open from the eleventh week. Course evaluations are anonymous, which means that no one can view the name of the student completing the evaluation. In addition, no one can view the evaluation itself until after the instructor has submitted the final grades. In small sections, demographic information should be left blank, if it could be used to identify the student.

6. **Disabilities policy:** All qualified students enrolled in this course are entitled to reasonable accommodations for a disability. Notify the instructor during the first week of class of accommodations needed. Students requiring accommodations register with Adaptive Educational Services (AES) and complete the appropriate AES-issued before receiving accommodations. The AES office is located at UC 100, Taylor Hall (Email: aes@iupui.edu, Tel. 317 274-3241). For more information visit <http://aes.iupui.edu>.
7. **Email:** Indiana University uses your IU email account as an official means of communication, and students should check it daily. Although you may have your IU email forwarded to an outside email account, please email faculty and staff from your IU email account.
8. **Emergency preparedness:** Know what to do in an emergency so that you can protect yourself and others. For more information, visit the emergency management website at <http://protect.iu.edu/emergency>.
9. **IUPUI course policies:** Several campus policies governing IUPUI courses may be found at the following link: http://registrar.iupui.edu/course_policies.html
10. **No class attendance without enrollment.** Only those who are officially enrolled in this course may attend class unless enrolled as an auditor or making up an Incomplete by prior arrangement with the instructor. This policy does not apply to those assisting a student with a documented disability, serving in an instructional role, or administrative personnel. <http://registrar.iupui.edu/official-enrollment-class-attendance.html> Children may *not* attend class with their parents, guardians, or childcare providers.
11. **Religious holidays:** Students seeking accommodation for religious observances must submit a request form to the course instructor by the end of the second week of the semester. For information visit <http://registrar.iupui.edu/religious.html>.
12. **Right to revise:** The instructor reserves the right to make changes to this syllabus as necessary and, in such an event, will notify students of the changes immediately.
13. **Sexual misconduct:** IU does not tolerate sexual harassment or violence. For more information and resources, visit <http://stopsexualviolence.iu.edu/>.
14. **Student advocate:** The Student Advocate assists students with personal, financial, and academic issues. The Student Advocate is in the Campus Center, Suite 350, and may also be contacted at 317 274-4431 or studvoc@iupui.edu. For more information visit <http://studentaffairs.iupui.edu/advocate>.

MISSION STATEMENT

The Mission of IUPUI is to provide for its constituents excellence in

- Teaching and Learning;
- Research, Scholarship, and Creative Activity; and
- Civic Engagement.

With each of these core activities characterized by

- Collaboration within and across disciplines and with the community;
- A commitment to ensuring diversity; and
- Pursuit of best practices.

IUPUI's mission is derived from and aligned with the principal components—Communities of Learning, Responsibilities of Excellence, Accountability and Best Practices—of Indiana University's Strategic Directions Charter.

STATEMENT OF VALUES

IUPUI values the commitment of students to learning; of faculty to the highest standards of teaching, scholarship, and service; and of staff to the highest standards of service. IUPUI recognizes students as partners in learning. IUPUI values the opportunities afforded by its location in Indiana's capital city and is committed to serving the needs of its community. Thus, IUPUI students, faculty, and staff are involved in the community, both to provide educational programs and patient care and to apply learning to community needs through service. As a leader in fostering collaborative relationships, IUPUI values collegiality, cooperation, creativity, innovation, and entrepreneurship as well as honesty, integrity, and support for open inquiry and dissemination of findings. IUPUI is committed to the personal and professional development of its students, faculty, and staff and to continuous improvement of its programs and services.