IIHCC

Solving problems that exist at, and along, the interdependencies between humans, community, and infrastructure to ultimately improve quality of life.

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UPCOMING EVENTS

2018

- **12/19** - HITT and IIC Intelligent Infrastructure Meeting
- **12/20** - HITT and IIC Intelligent Infrastructure Meeting
- **12/24 to 12/31** - Winter Closing

2019

- **1/1** - New Year's Day (University Closed)
- **1/29** - IIHCC Monthly Stakeholder Update Meeting

If you have any question, comments, or concerns, please contact us:

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For more information about IIHCC, visit our website

Photo courtesy of VT Daily News

FUTUREHAUS WINS IN DUBAI

Taking top marks in nearly every category, Virginia Tech won first place at the 2018 Solar Decathlon Middle East challenge and received praise for its transdisciplinary approach. To create their award-winning design, Virginia Tech's team of 20 students and four faculty members from the College of Engineering and College of Architecture collaborated with researchers across the University, from the Myers-Lawson School of Construction and the College of Science, to the Pamplin College of Business and the College of Liberal Arts and Human Sciences. Institutes like the Center for Power Electronic Systems (CPES), the Design, Research, and Education for Additive Manufacturing Systems (DREAM) Lab, and the Center for Human-Computer Interaction (CHCI) also played pivotal roles. CPES's "spine" power system, for example, was crucial to the modularity that allowed the house to be quickly and efficiently assembled on-site. For more information on the FutureHAUS and 2018 Solar Decathlon Middle East, visit the VT Daily News website.

Information courtesy of VT Daily News

RURAL HEALTH RFP UPDATE

Recently, IIHCC participated and provided funding for a Rural Health RFP alongside with the Learning Systems Innovation and Effectiveness (LSIE) Office, participating Destination Areas (DAs) and Strategic Growth Areas (SGAs), and participating investment institutes. The selection committee selected five proposal to receive funding toward research in rural community health. To view these selected proposals, visit the VT Daily News website.

IIHCC AND THE VIRGINIA TECH MASTER PLAN

Recently, the Board of Visitors approved a resolution to adopt the 2018 Campus Master Plan, a document to guide the physical development of the Blacksburg campus and its 11 agriculture research and extension centers through the year 2047. The Campus Master Plan spotlights the IIHCC, its importance to the future growth of the University, and its mission, writing, "The IIHCC Destination Area balances advancing technology with economic and policy structures that are equitable and fair and that lead to the overall well-being of society." Nine facilities specifically associated with the IIHCC are mentioned in the plan:

- Infinite Loop
- Drone Park
- Hitt Hall
- Intelligent Infrastructure Complex
- Intelligent Infrastructure Corridor
- Smart Village
- Advanced Design and Construction Facility (ADCF)
- Kroehling Advanced Materials Foundry
- Smart Energy Park

Furthermore, the Master Plan cites the potential of the Stream Research, Education, and Management (StREAM) Lab's Stroubles Creek project for campus riparian stormwater management in addition to its ongoing research in environmental rehabilitation.
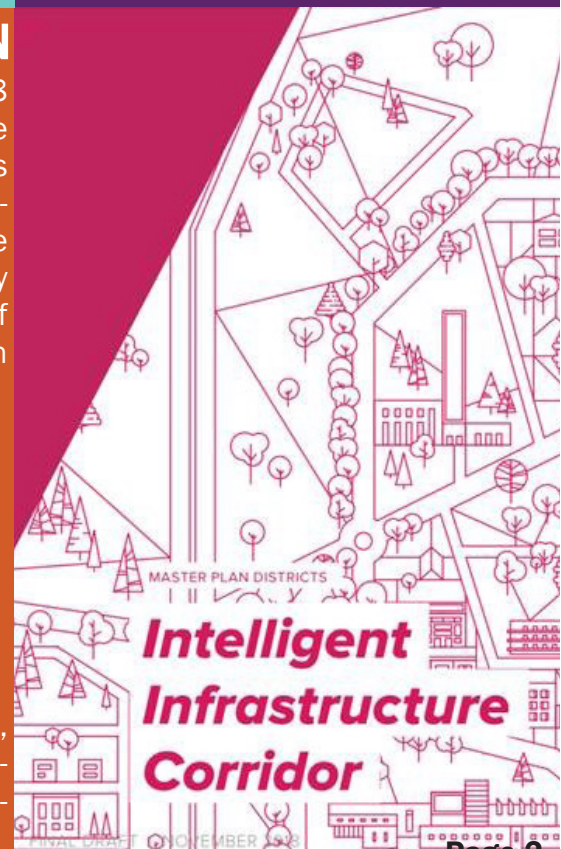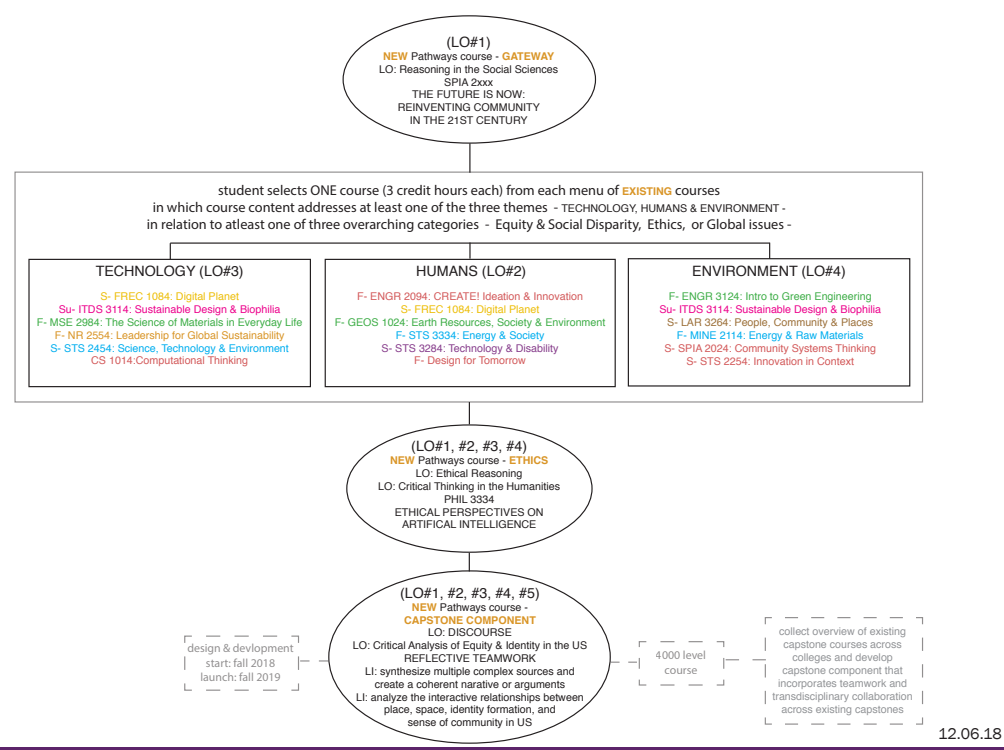

MASTER PLAN DISTRICTS

Intelligent Infrastructure Corridor

Photo courtesy of Virginia Tech Campus Master

SCIENCE, ENGINEERING, ARTS, AND DESIGN (SEAD) GRANT

IIHCC, Curriculum and Instruction (C+I), and the Institute for Creativity, Arts, and Technology (ICAT) are partnering on a research grant worth $25,000. To support the missions of IIHCC, C+I, and ICAT, all proposals are expected to align with one or more of the IIHCC thematic areas, support the transdisciplinary mission of ICAT, and have a focus on human-centered interactions.

In addition to these requirements, awardees are expected to present at the IIHCC TRAIN Talks in the fall of 2019 and ICAT Creativity and Innovation Day in the spring of 2020. The deadline for submissions is February 1, 2019. For more information about the SEAD grant, contact us at IIHCC@vtti.vt.edu.

IIHCC PATHWAYS MINOR - T.H.E.
Technology, Humans & Environment

(LO#1)
NEW Pathways course - GATEWAY
LO: Reasoning in the Social Sciences
SPIA 2xxx
THE FUTURE IS NOW:
REINVENTING COMMUNITY
IN THE 21ST CENTURY

student selects ONE course (3 credit hours each) from each menu of EXISTING courses
in which course content addresses at least one of the three themes - TECHNOLOGY, HUMANS & ENVIRONMENT -
in relation to atleast one of three overarching categories - Equity & Social Disparity, Ethics, or Global issues -

TECHNOLOGY (LO#3)
S- FREC 1084: Digital Planet
Su- ITDS 3114: Sustainable Design & Biophilia
F- MSE 2984: The Science of Materials in Everyday Life
F- NR 2554: Leadership for Global Sustainability
S- STS 2454: Science, Technology & Environment
CS 1014:Computational Thinking

HUMANS (LO#2)
F- ENGR 2094: CREATE! Ideation & Innovation
S- FREC 1084: Digital Planet
F- GEOS 1024: Earth Resources, Society & Environment
F- STS 3334: Energy & Society
S- STS 3284: Technology & Disability
F- Design for Tomorrow

ENVIRONMENT (LO#4)
F- ENGR 3124: Intro to Green Engineering
Su- ITDS 3114: Sustainable Design & Biophilia
S- LAR 3264: People, Community & Places
F- MINE 2114: Energy & Raw Materials
S- SPIA 2024: Community Systems Thinking
S- STS 2254: Innovation in Context

(LO#1, #2, #3, #4)
NEW Pathways course - ETHICS
LO: Ethical Reasoning
LO: Critical Thinking in the Humanities
PHIL 3334
ETHICAL PERSPECTIVES ON
ARTIFICAL INTELLIGENCE

(LO#1, #2, #3, #4, #5)
NEW Pathways course -
CAPSTONE COMPONENT
LO: DISCOURSE
LO: Critical Analysis of Equity & Identity in the US
REFLECTIVE TEAMWORK
LI: synthesize multiple complex sources and
create a coherent narrative or arguments
LI: analyze the interactive relationships between
place, space, identity formation, and
sense of community in US

design & devlopment
start: fall 2018
launch: fall 2019

4000 level
course

collect overview of existing
capstone courses across
colleges and develop
capstone component that
incorporates teamwork and
transdisciplinary collaboration
across existing capstones

12.06.18

INSTITUTE FOR CRITICAL TECHNOLOGY AND APPLIED SCIENCE (ICTAS) JUNIOR FACULTY AWARD (JFA)

Together, IIHCC and ICTAS are providing an additional $80,000 for ICTAS's JFA. A new request for proposals (RFP), which should be out the first week of December 2018, will emphasize the goals and mission of IIHCC while adhering to criteria already determined by ICTAS. Proposal review is expected to begin in the first weeks of February 2019. Notification of awards will occur in March 2019. As of now, IIHCC is requesting assistance from four IIHCC stakeholders/co-leads to serve as proposal reviewers. If you wish to help, please contact us at IIHCC@vtti.vt.edu.

IIHCC PATHWAYS MINOR UPDATES

The IIHCC Curriculum Working Group (CWG), led by Kathryn Albright, Associate Dean, College of Architecture and Urban Studies, is in the process of finalizing an IIHCC Pathways Minor: Technology, Human, and Environment (T.H.E.). The 18-credit minor will cover the four IIHCC core thematic areas (Energy, Robotics and Automated Vehicle Systems, Smart Design and Construction, and Ubiquitous Mobility) and will focus on five learning objectives related to technology, humans, and the environment.

Interested undergraduate and graduate students may choose multiple entry points, including the Gateway course The Future is Now: Reinventing Community in the 21st Century (currently SPIA 2984), or the mid-tiered fusion course Ethical Perspectives on Artificial Intelligence (currently PHIL 2984). The minor will conclude with a reflective teamwork Capstone course.

Completion of the University governance approval process is expected by the end of Spring 2019, with associated courses available as early as the beginning of the Spring 2019 semester. For more information on this matter, please contact department advisors or consult the course timetable.

WORD ON THE STREET *Exploring transdisciplinary and human-centered work around the world*

6 Southern Nevada jurisdictions sign joint 'Smart Community Vision'— Southern Nevada juridictions partnered together and developed an outline describing a goal for technologically advanced communities to improve residents' lives. The framework for these future communities revolve around the idea of sustainability, quality of life, and infrastructure. Included in the article is the document approved by the six jurisdictions.

Agricultural Drones: Relatively cheap drones with advanced sensors and imaging capabilities are giving farmers new ways to increase yields and reduce crop damage. — A look into how one of many farmers in California's Sonoma Valley is utilizing capable and relatively inexpensive drone technology to automate sometimes costly and time consuming work.