



SOUTH SEATTLE COLLEGE

One of the Seattle Colleges

Sustainable Building Science Technology Bachelor of Applied Science

Energy/Facilities Connections Conference 2019

Alison Pugh, Faculty, South Seattle College

Denzil Tracey, Student & Stationary Engineer, Seattle Public Schools

SBST Program Information

Accessible, Affordable, Innovative

Seattle Region – Smart Building Growth



Source: <https://www.spaceneedle.com/webcam>



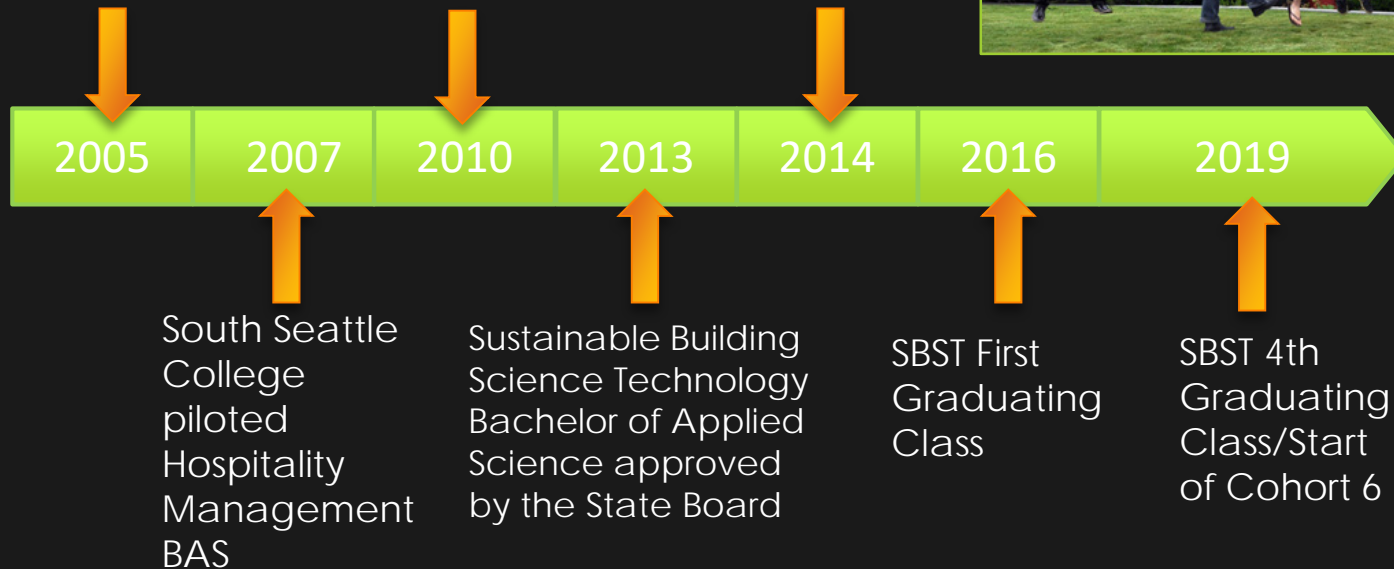
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Bachelor of Applied Science Degrees in Washington State

Legislature gives the State Board of Community and Technical Colleges authority to pilot Bachelor of Applied Science programs

Legislature changed from pilot to regular status

SBST Cohort 1 Begins



100+ BAS degrees are currently approved in the state of Washington



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What Will I Learn in the Program?

○ What it is

- Sustainable and efficient commercial building operations & management - combination of:
 - Technical skills – building science, building systems, controls, codes, whole building performance
 - Management – facilities management, fiscal management, professional communications
 - The business of sustainability – energy auditing & analysis, energy policy, financing energy efficiency & renewable energy



○ What it isn't

- Construction, design*
- Residential*
- **although these are great foundations for learning in the program*



How Will I Learn?

- Hybrid program built for the working professional: combines online and face-to-face instruction
 - Mostly online using Canvas, the learning management system
 - 4 Saturday, all-day class meetings a quarter, South Seattle College, Georgetown Campus
 - Team projects
- Includes internship and capstone – can leverage current job for project work
- Cohort program – students start in SBST class in fall and move together through the program for six quarters (f, w, sp)
- Opportunity to earn credit for prior work experience through PLA (prior learning assessment) – most students earn 18 credits through this process.



Technical Advisory Board (TAB)

- TAB Current Representation: Hermanson Co., McKinstry, MacDonald Miller, Emerald Cities, Sheraton Seattle, ATS Automation, CBRE, Evergreen Hospital, Workforce Incubator
- Critical activities of the TAB
 - Refine/provide feedback to the degree design
 - Discuss trends in industry with educators
 - Provide options for scholarships and internships
 - Mentor students
 - Spread the word and promote the program!



What about after graduation?



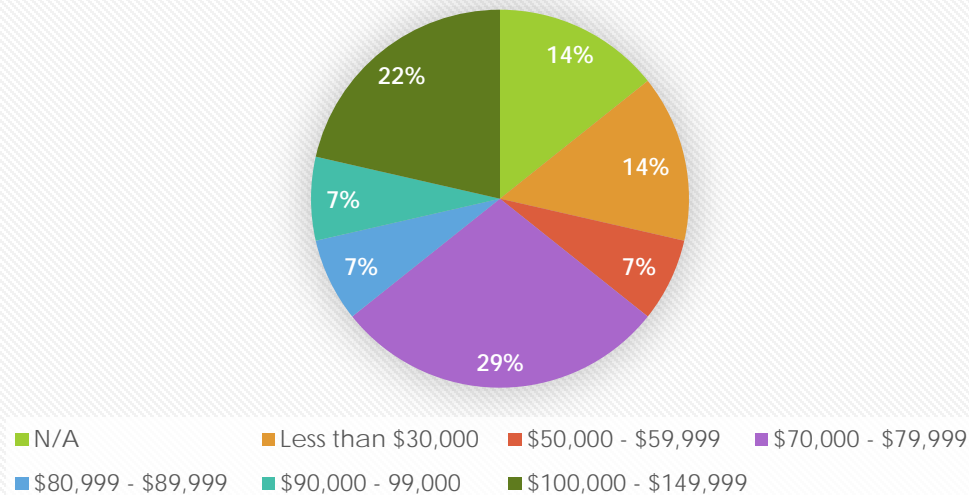
- Most students already work full-time
 - Internal promotions
 - Career advancement with other organizations
- Actual Jobs of Grads: Electrical Foreman, Facilities Manager, Senior Electrical Inspector/Plans Examiner, Building Performance Engineer, Mechanical Designer, Chief Technology Officer, Assistant Director-Capital Projects, Building Operations Manager, Administrative Program Manager, Resource Conservation Manager
- Actual Companies/Orgs: Prime Electric, Hines, City of Seattle, South Seattle College, King County Housing Authority, Seattle Public Utilities, Seattle City Light, JLL, Tesla, Hermanson, Puget Sound Energy, Seattle Public Schools, Evergreen Hospital, Northcoast Electric, WADoT
- Graduates are qualified (with experience) to perform Seattle Building Tune-ups
(<http://www.seattle.gov/environment/climate-change/buildings-and-energy/building-tune-ups>)



What about after graduation?

- Building Engineer, 60K-72K; Senior Building Engineer, 65K-79K; Asst. Chief Building Engineer, 72K-89K –Source, WBEC (<https://www.wabuildingengineers.org/>)
- Facilities Manager – (Business Ops Specialist, title) \$82K for Seattle King County WDA - Source, WA Employment , 2016
- Actual Salaries of Grads*

Salary Range for Graduates



*n = 14, representing those who have answered the survey





Faculty



Alison Pugh

- PI of National Science Foundation Grant, Aligning Students into Accelerated Pathways (ASAP)
- Faculty & Faculty Coordinator of SBST
- Former PI and Co-PI of two successfully completed NSF Grants
- Former Department Chair and Faculty of Energy Management associate's program at Edmonds Community College
- MBA in Sustainable Business

Victoria Hardy

- Industry experience
- Academic experience
 - Wentworth Institute of Technology
 - Ferris State University
- Extensive work with advisory committees
- Experience with program accreditation and TABs
- Founding Lead Faculty for the SBST program, now Part-Time faculty

Steve Abercrombie

- Co-PI of National Science Foundation Grant, Aligning Students into Accelerated Pathways (ASAP)
 - Full time consultant / commissioning agent
- Adjunct Faculty – South Seattle
- 12 years teaching in higher-ed
 - Specialist in building-related adult education



Program Accolades

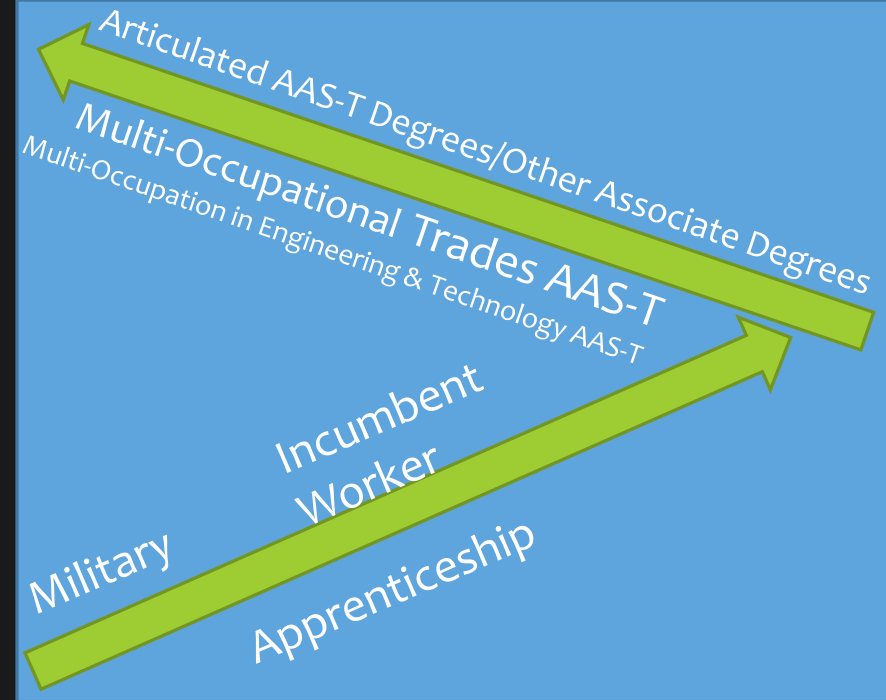
- 2014-2018 - Awarded large National Science Foundation Grant, *Expanding Lifelong STEM Career Pathways in Sustainable Building Science Technology*
- 2017-2018 – Awarded grant through the Council on Experiential Learning (CAEL) to develop a STEM pathway for veterans
- 2017 - Recipient of the Energy/Facilities Connections Innovations Award by the Washington State University Energy Program/Plant Operations Support Consortium
- 2017 – Jerry Hermanson of Hermanson Co. donated \$200,000 to create an endowment for the program
- 2018 - National recognition from the Association for the Advancement of Sustainability in Higher Education (AASHE) as a curriculum feature in the 2018 Sustainable Campus Index
- 2019-2022 - Awarded large National Science Foundation Grant, *Aligning Students in Accelerated Pathways in Engineering, Technology, and Building Science*



Admission Requirements

- 2-year associate degree (or within 25 credits)
- At least 2 years relevant work experience
 - Built environment
 - Business/Sustainability
 - Volunteer Experience
- Not a pre-req for admission, but must complete before graduation, 25 credits general ed: math, English, science, etc. (typically earned at associate's level)
- <http://www.southseattle.edu/programs/bas/sustainable-building-science-technology/Default.aspx>

Sustainable Building Science Technology
Bachelors of Applied Science Degree



How to Apply

Beginning Fall 2019, you can apply online:

<https://www.seattlecolleges.edu/bas/sustainabletechnology>

You will need to submit:

- \$35 application fee – can be paid online
- Transcripts for all prior college coursework
- Industry experience verification
- Personal statement
- Letters of recommendation - 2 required



Program Questions?

- Contact Information:
 - Anneke Hercules, Program Manager
 - 206-934-6783
 - Anneke.Hercules@seattlecolleges.edu
 - Alison Pugh, Faculty Coordinator
 - 206-934-5375
 - Alison.Pugh@seattlecolleges.edu



Denzil Tracey, SBST Student

- Background
 - Graduating Senior
 - Stationary Engineer at Seattle Public Schools
 - Why SBST?
- Capstone Project
 - https://drive.google.com/file/d/1s_DrGzBWFfprmMK91tMn9aQvG_kft1q8/view
 - <https://kahoot.com/>
- Link to Game
 - <https://kahoot.it/>

