CCUR Services, Equipment, and Facilities

Fee Schedule

CCUR has 35,000 square feet of pilot plant processing and support space available for wet processing, dry processing, fermentation and product recovery, industrial product development, food preparation, and consumer and sensory testing.

Services

All charges are based on days of equipment usage, cost of supplies and materials and need for equipment operators.

On-Campus No Charge

Off-Campus

Soy protein concentration (acid washed, 15 kg soy meal) $2,796.00
Soy protein isolation (15 kg soy meal) 4,208.00
Wet corn milling (100 g product only) 500.00
Wet corn milling (100 g product and mass balance) 750.00
Wet corn milling (1 kg product only) 1,000.00
Wet corn milling (1 kg product and mass balance) 1,300.00
Wet corn milling (10 kg product only) 2,500.00
Wet corn milling (10 kg product and mass balance) 3,000.00
Feed-grade soybean extraction (1 bu soybeans) 2,310.00
Food-grade soybean extraction (1 bu soybeans) 2,640.00

Total nitrogen and protein content (Dumas method using the Vario-Max CN Analyzer, includes duplicate replications) $20.00/sample
Crude free fat (oil) content (Goldfisch extraction method, includes duplicate replications) $40.00/sample

Assistance Fees

On-Campus

Manager assistance (per hour) $40.94
Student equipment operator (per hour) 12.00

Off-Campus

Manager assistance (per hour) $61.41
Student equipment operator (per hour) 18.00

Facilities

Industry Incubator Space

Pilot plant (per sq. ft., per year) $33.12
Laboratory (typically 440 sq. ft.) (per sq. ft., per year) 28.78
Office (typically 120 sq. ft.) (per sq. ft., per year) 23.76

Technology Transfer Theatre (non-CCUR affiliated members)

Up to four hours $26.00
Full day 52.00
Additional services (base charge for first hour) 52.00
Additional services per hour 36.00

Test kitchen and sensory labs (per day) $156.00
## Equipment Available

### Aspirators
- Cascade aspirator, Kice .................................................. $50.00
- Small aspirator, Carter-Day .............................................. 50.00

### Centrifuges
- Separator-type disc continuous (BPTX 205), Alfa-Laval ....... 355.00
- Three-phase horizontal-decanter-continuous, Centrisys .... 534.00
- Tubular, semi-continuous, high-speed centrifuge, CEPA .... 509.00

### Conveyors
- Mobile screw grain conveyor, Flexifeeder ...................... 50.00
- Tempering conveyor ..................................................... 50.00

### Dryers
- 3-tray freeze dryer ....................................................... 150.00
- 8-tray freeze dryer ....................................................... 220.00
- Medium tray dryer ...................................................... 105.00
- Mini dryer drum ............................................................ 108.00
- Mini solvent spray dryer, Buchi .................................... 328.00
- Spinning-disk atomizer feed spray dryer, APV Crepaco Inc. 348.00

### Evaporators
- Single-effect evaporator, C.E. Rogers ................................ 53.00

### Extruders
- Autogenous extruder with cutter, Insta-Pro ...................... 91.00
- Cooker extruder/expander with oil cage, Anderson International .... 149.00
- Single or twin-screw extruder (plastics), Brabender ............ 279.00
- Large twin-screw extruder, Leistritz .......................... 440.00
- Small twin-screw extruder, Leistritz .......................... 279.00

### Feeders
- Variable speed feeder, Nelson .................................... 50.00
- Variable speed feeder, Schenck AccuRate ..................... 110.00
- Variable speed feeder, Vibra Screw Corp. ................. 50.00

### Filters
- Rotary vacuum drum filter, Filtration Engineers ............. 145.00
- Vertical plate filter with horizontal plate, Industrial Filter .... 50.00

### Hydroclones
- Germ hydroclone, Dorr-Oliver ...................................... 50.00
- Starch-gluten hydroclone, Dorr-Oliver ...................... 50.00

### Jet Cookers
- Hydro-therm hydroheater jet cooker with pump ............... 129.00
- Jet cooker, Pick ......................................................... 50.00

### Kettles
- 10-gal oil refining and bleaching kettle ......................... 50.00
- Variable-speed twin-agitator heated kettle, Groen .......... 51.00

### Mills
- 12-inch disc mill, Andritz Sprou-Bauer ......................... 63.00
- Burr grinder, Mahlkonig ........................................... 50.00
- Cracking roller mill, Blount Ferrell-Ross Lapage .......... 50.00
- Cutting roller mill, Blount Ferrell-Ross Lapage .......... 50.00
- Colloid mill, Chemicolloid Labs .............................. 50.00
- Disc mill, Glen Mills .................................................. 50.00
- Dry-corn milling system, Wittt Corrugation ................. 66.00
- Flaking roller mill, Roskamp .................................... 50.00
- Hammer mill, Horvick Manufacturing ....................... 50.00
- Hammer mill, Viking ............................................... 100.00
- Impact mill, Entolet ................................................ 69.00
- Impact mills (comminuting), Fitzpatrick .................. 177.00
- Lab mill, Thomas-Wiley .......................................... 55.00
- Microcut grinder, Stephan Machinery Corp. ............... 58.00
- Pellet mill, California Pellet Mill ............................. 86.00
- Plastic pellet pelletizer, Brabender ........................ 50.00
- Turbo/pin mill, Bauermeister ................................. 289.00
- Ultra-centrifugal mill, Retsch .................................. 50.00

### Mixers
- Mixer and lifting cart, Lightnin Mixer .......................... 50.00
- Planetary food mixer (SM402NA), Doyon ................... 50.00
- Ribbon mixer, Rapids Machinery ............................. 50.00
- Variable speed gear batch mixer, Mixco ................... 50.00

### Pumps
- 2-ton hydraulic press (compression molding), Wabash .... 50.00
- 150-ton press (compression molding), Wabash .......... 180.00
- Cheese press, Tippen ............................................... 50.00
- Cider press, Day Equipment ................................. 50.00
- Hydraulic grape press .............................................. 55.00

### Scales
- 125 lb-max bench scale, Avery Weigh-Tronix ............. 50.00
- Deck scale, Avery Weigh-Tronix ............................. 50.00
- Mobile platform deck scale, Avery Weigh-Tronix ....... 50.00

### Screens
- Oscillating separatory screen, Sweco ......................... 124.00
- Vibrating screen, Prater ............................................ 50.00

### Screw Presses
- Machinery screw press, Hander Oil .......................... 54.00
- Screw press, Komet ................................................ 50.00

### Tanks
- 50-gal mobile tank with agitator, St. Regis .................. 50.00
- 50-gal mobile jacketed tank with agitator, Cherry Burrell ... 50.00
- 50-gal mobile tank with agitator ............................. 50.00
<table>
<thead>
<tr>
<th>Equipment Description</th>
<th>Price</th>
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<tbody>
<tr>
<td>70-gal jacketed feed tank, Process Storage</td>
<td>50.00</td>
</tr>
<tr>
<td>70-gal stainless steel tank</td>
<td>50.00</td>
</tr>
<tr>
<td>80-gal stainless tank with air and electric mixer, Walker</td>
<td>112.00</td>
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<tr>
<td>200-gal stainless tank with variable speed mixer, Walker</td>
<td>83.00</td>
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<tr>
<td>500-gal tank with agitator</td>
<td>413.00</td>
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**Other Equipment**

<table>
<thead>
<tr>
<th>Equipment Description</th>
<th>Price</th>
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<tbody>
<tr>
<td>Blancher, vegetable, Dixie Canner Equipment</td>
<td>50.00</td>
</tr>
<tr>
<td>Boiler, Lattner culinary steam boiler</td>
<td>50.00</td>
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<tr>
<td>Cheese vat with temperature control</td>
<td>100.00</td>
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<tr>
<td>Chiller</td>
<td>50.00</td>
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<tr>
<td>Chromatograph, Variant</td>
<td>528.00</td>
</tr>
<tr>
<td>Cooker/conditioner, 3-stack, French Oil Machine</td>
<td>58.00</td>
</tr>
<tr>
<td>Corn degeminarator</td>
<td>50.00</td>
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<tr>
<td>Desolventizer toaster, Crown</td>
<td>Call for quote</td>
</tr>
<tr>
<td>Drum cooler and spray coater, Insta-Pro</td>
<td>50.00</td>
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<tr>
<td>Filter press, plate and frame, Star Systems</td>
<td>66.00</td>
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<tr>
<td>Forklift truck, 3,000-lb capacity, Yale Materials Handling</td>
<td>61.00</td>
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<tr>
<td>Freezer, reach-in freezer, True-Food</td>
<td>50.00</td>
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<tr>
<td>Glue spreader, Black Brothers Co.</td>
<td>50.00</td>
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<tr>
<td>Heat-exchanger plate</td>
<td>50.00</td>
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<tr>
<td>Homogenizer, Gaulin</td>
<td>50.00</td>
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<tr>
<td>Ice cream machine</td>
<td>100.00</td>
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<tr>
<td>Incubators, Fisher Scientific</td>
<td>50.00</td>
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<tr>
<td>Injection molding machine, 20-ton, Boy Machines, Inc.</td>
<td>104.00</td>
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<tr>
<td>Large variable speed agitator</td>
<td>50.00</td>
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<tr>
<td>Margarine, pilot scraped surface heat exchanger/margarine crystallizer unit, Armfield</td>
<td>328.00</td>
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<tr>
<td>Membrane-filtration unit, North Carolina SRT</td>
<td>221.00</td>
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<tr>
<td>Micro-brewery production line</td>
<td>297.00</td>
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<tr>
<td>Pasteurizer, MicroThermics</td>
<td>252.00</td>
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<tr>
<td>Potato peeler, mechanical, Hobart</td>
<td>50.00</td>
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<tr>
<td>Reactor, 3-gal, Hastelloy high-pressure reactor, Fluitron</td>
<td>182.00</td>
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<tr>
<td>Retort, 50-gal, Dixie</td>
<td>54.00</td>
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<tr>
<td>Retort, 40-lbs, Loveless</td>
<td>100.00</td>
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<tr>
<td>Separator, gravity table, Kamas Westrup</td>
<td>50.00</td>
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<tr>
<td>Sieve shaker, Tyler Ro-Tap</td>
<td>50.00</td>
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<tr>
<td>Small variable speed agitator</td>
<td>50.00</td>
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<tr>
<td>Soymilk plant with tofu press, automatic, Takai</td>
<td>274.00</td>
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<tr>
<td>Stack disk cream separator</td>
<td>100.00</td>
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<tr>
<td>Table, starch-protein separation table</td>
<td>50.00</td>
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<tr>
<td>Tempering device, seed</td>
<td>50.00</td>
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<tr>
<td>Testing machine, universal, Instron</td>
<td>172.00</td>
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<tr>
<td>UHT/HTST pasteurizer, Microthermics</td>
<td>252.00</td>
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<tr>
<td>Vacuum packaging machine, gas flash, Koch</td>
<td>100.00</td>
</tr>
<tr>
<td>Vegetable pulper, F.H. Langson Kamp</td>
<td>50.00</td>
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<tr>
<td>Walk-In cooler, 40 ºF</td>
<td>Call for quote</td>
</tr>
<tr>
<td>Washing system, oscillating screen, Kason Vibroscreen</td>
<td>50.00</td>
</tr>
<tr>
<td>Water heater, circulating and controller Microtherm</td>
<td>50.00</td>
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</tbody>
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1. All prices subject to change.
2. Limited industry incubation space may be available to off-campus users.
3. All fees are daily user fees, not including manager or student equipment operator, available for fee (see above).

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