

# RFP #24-012224 – Ultra-High Resolution Micro-Precision 3D Printing System

## YOUNGSTOWN STATE UNIVERSITY REQUEST FOR PROPOSAL

Date Issued: January 29, 2024

Due Date/Time: February 23, 2024, 5:00 PM ET

### RFP #24-012224 – Ultra-High Resolution Micro-Precision 3D Printing System

Youngstown State University (YSU) is seeking a qualified service provider for an Ultra-High Resolution Micro-Precision 3D Printing System. This product must be in accordance with the terms, conditions and requirements set forth in this Request for Proposal (RFP).

Proposals must be received by the due date/time specified above at the location below. Proposals received after the due date/time may be returned unopened, to the Vendor.

Sign and deliver proposal, cover sheet, and schedules to:  
Mailing Address:

Procurement Services  
Jones Hall – 2<sup>nd</sup> Floor  
Youngstown State University  
1 Tressel Way  
Youngstown, Ohio 44555

Phone: 330-941-3193  
Attention: Alan Miller  
email: [procure@ysu.edu](mailto:procure@ysu.edu)  
Email bids are permitted

Envelopes must be sealed and designated- RFP #24-012224 – Ultra-High Resolution Micro-Precision 3D Printing System

**Note:**

1. No public proposal opening will be held due to the complexity of responses and need for committee review.
2. Completed Proposal Packages need to be received via email or via a packet that includes an original printed hard copy and a flash drive.
3. Final results will be posted on the [Procurement Services Competitive Events](#).

*By signing this document I am agreeing, on behalf of my firm, to the specifications of this RFP and accepting, without exception or amendment, [YSU's Purchase Order Terms and Conditions](#).*

Submitted by: Company \_\_\_\_\_

Authorized Signature \_\_\_\_\_

Name \_\_\_\_\_  
(Printed Name) (Title) (Date)

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## RFP TIMELINE AND SCHEDULE

- **RFP ISSUED:** February 2, 2024
- **RFP QUESTIONS DUE:** February 9, 2024, by 2:00 PM ET
- **RESPONSES TO QUESTIONS:** February 16, 2024, by 5:00 PM ET
- **RFP CLOSING DATE:** February 23, 2024, by 5:00 PM ET
- **PRESENTATIONS:** Early March 2024
- **CONTRACT AWARD DATE:** March 2024

### **About YSU**

YSU, an urban research university, emphasizes a creative, integrated approach to education, scholarship, and service. YSU places students at its center; leads in the discovery, dissemination, and application of knowledge; advances civic, scientific, and technological development; and fosters collaboration to enrich the region and the world.

YSU consists of the College of Graduate Studies and six undergraduate colleges: Beeghly College of Liberal Arts, and Education (BCLASSE), Bitonte College of Health & Human Services (BCHHS), Cliffe College of Creative Arts (CCCA), College of Science, Technology, Engineering and Mathematics (STEM), Williamson College of Business Administration (WCBA), and the Sokolov Honors College.

YSU is located on a 145-acre campus near downtown Youngstown, Ohio and is equidistant (approximately 60 miles) from both Pittsburgh and Cleveland. Fall 2023 enrollment was 10,993.

### **RFP Background**

This request for proposals (RFP) is to provide qualified equipment vendors an opportunity to present their qualifications, experience, and conceptual approach to providing the scope of services in relation to the needs of Youngstown State University. This RFP will provide interested providers with sufficient information to prepare and submit proposals for consideration by Youngstown State University to satisfy the need for an Ultra-High Resolution Micro-Precision 3D Printing System as noted below in the specifications.

### **SECTION I Definitions**

Relative to this document, and any addenda incorporated therein, the following definitions apply.

**Addendum:** A written instrument, issued solely by YSU that details amendments, changes or clarifications to the specifications and terms and conditions of this RFP. Such written instrument shall be the sole method employed by YSU to amend, change or clarify this RFP, and any claims (from whatever source) that verbal amendments, changes or clarifications have been made shall be summarily rejected by YSU.

**Agreement, Contract or Purchase Order:** Award resulting from the RFP or Request for Quotation.

**Bidder, Vendor, Awardee, Supplier:** Respondent to the RFP or Request for Quotation.

**May, Should:** Indicates something that is requested but not mandatory. If the Vendor fails to provide requested information, YSU may, at its sole option, either request that the Vendor provide the information or evaluate the proposal without the information.

**Proposal, Quotation:** Response provided by Vendor.

**Proposal Closing Date:** The date and time specified in this RFP by which the quotation or proposal must be received by YSU Procurement Services in accordance with Section II of this RFP. Proposals received after such date and time may not be considered.

**RFP:** Request for Proposal.

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**Shall, Must, Will:** This indicates a mandatory requirement. Failure to meet mandatory requirements may invalidate the proposal or result in rejection of a proposal or quotation as non-responsive.

### SECTION II

#### YSU Standard RFP Instructions and Agreement Terms

Vendors are cautioned to read this entire document carefully and to prepare and submit their response providing all requested information in accordance with the terms and conditions set forth herein. To be considered, Vendors must submit a complete response to this RFP in the format detailed by the specifications. Proposals must be dated, signed by an official authorized to bind the Vendor to the terms of the proposal and submitted to YSU in accordance with the instructions, terms and conditions of this RFP.

Youngstown State University reserves the right to:

- Accept or reject any or all proposals, or any part thereof, or to withhold the award and to waive, or decline to waive, irregularities in any proposal when determined that it is in its best interest to do so;
- Hold all proposals for a period of up to one hundred twenty (120) days after the opening date and to accept a proposal not withdrawn before the scheduled proposal opening date;
- Waive any informality or technicality contained in any proposal received;
- Waive any minor or major defect in the proposal;
- Conduct discussions with respondents and accept revisions of proposals after the closing date;
- Make an award based upon various selection criteria;
- Request clarification from any Vendor on any or all aspects of its proposal;
- Cancel and/or reissue this RFP at any time;
- Retain all proposals submitted in response to this RFP;
- Invite some, all, or none of the Vendor(s) for interviews, demonstrations, presentations and further discussion;
- Negotiate a possible contract and potentially solicit "best and final offers" from some or all respondents prior to or during this negotiation process;
- Award to one, some, or none of the Vendors who submit proposals.

Proposals received after the time for closing may be considered invalid.

Apart from the contact required for any on-going business at YSU, Vendors are specifically prohibited from contacting any individual at, or associated with, YSU regarding this RFP. Vendor communication shall be limited to the contact named on the cover page of this document.

#### RFP Terms and Instructions:

1. Agreement Extension: YSU reserves the right to extend any Agreement resulting from this RFP beyond the normal expiration date if YSU determines it to be in their best interest and the selected Vendor(s) agrees to the extension.
2. Assignment: Any Agreements entered into as a result of this offering may not be assigned by the selected Vendor without the expressed written consent of YSU and the participating members.

Compliance: Vendor warrants that both in submission of its proposal and performance of any resultant purchase order or contract, Vendor will comply with all applicable federal, state, and local laws, regulations, rules, and/or ordinances.

3. Confidential Information: Any and all information, the release of which is prohibited by state or federal law or regulation, including but not limited to the protections of the Family Educational Rights and Privacy Act (FERPA), and the Gramm Leach Bliley Act (GLBA) constitutes Confidential Information. Vendor agrees to hold the Confidential Information in strictest confidence. Vendor shall not use or disclose Confidential Information received from or on behalf of the University or any of its students, faculty, or staff except as permitted or required by contract or by law, or as otherwise agreed to in writing by the University. Vendor shall implement, maintain, and use appropriate administrative, technical, and physical security measures to preserve the confidentiality, integrity, and availability of all electronically

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maintained or transmitted Confidential Information. Service Organization Control (SOC) Audit reports must be available if applicable to this event. Vendor shall abide by the Privacy and Security Rules as set forth by the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

4. Conflicts of Interest and Ethics Compliance: No personnel of Vendor or member of the governing body of any locality or other public official or employee of any such locality in which, or relating to which, the work under this Agreement is being carried out, and who exercise any functions or responsibilities in connection with the review or approval of this Agreement or carrying out of any such work, shall, prior to the completion of said work, voluntarily acquire any personal interest, direct or indirect, which is incompatible or in conflict with the discharge and fulfillment of his or her functions and responsibilities with respect to the carrying out of said work. Any such person who acquires an incompatible or conflicting personal interest, on or after the effective date of this Agreement, or who involuntarily acquires any such incompatible or conflicting personal interest, shall immediately disclose his or her interest to YSU in writing. Thereafter, he or she shall not participate in any action affecting the work under this Agreement, unless YSU shall determine in its sole discretion that, in the light of the personal interest disclosed, his or her participation in any action would not be contrary to the public interest.
5. Ethical Conduct: It is expected that once an Agreement is issued, Vendors (awarded or not awarded) will not undertake any actions that might interfere with, or be detrimental to, the contractual obligations of YSU. YSU reserves the right to take any and all actions deemed appropriate in response to unethical conduct by a Vendor. Such actions include, but are not limited to, establishing guidelines for campus visits by a Vendor, and/or removal of a Vendor from YSU's Vendor list(s).
6. Contact: Apart from the contact required for any on-going business at YSU, Vendors are specifically prohibited from contacting any individual at, or associated with YSU regarding this RFP. Vendor communication shall be limited to the contact named in this RFP document. A Vendor's failure to adhere to this prohibition may, at YSU's sole discretion, disqualify the Vendor's proposal.
7. Evaluation: If an award is made, the Vendor(s) whose proposal, in the sole opinion of YSU, represents the best overall value to YSU will be selected.
8. Findings for Recovery (Ohio Revised Code Section 9.24): Ohio Revised Code (O.R.C.) Section 9.24, prohibits the state from awarding a contract to any Vendor against whom the Auditor of State has issued a finding for recovery if the finding for recovery is "unresolved" at the time of award. By submitting a proposal, Vendor warrants that it is not now, and will not become subject to an "unresolved" finding for recovery under O.R.C. 9.24, prior to the award of any contract arising out of this RFP, without notifying YSU of such finding.
9. Hold Harmless: It is understood that the Vendor, if awarded an Agreement agrees to protect, defend, indemnify, and save harmless YSU from any claims suits or demands for payment that may be brought against it due to the acts, errors or omissions of Vendor in providing the services under this Agreement.
10. Incurred Expenses: The Vendor, by submitting a proposal, agrees that any costs incurred by responding to this RFP or in support of activities associated with this RFP shall be the Vendor's sole responsibility and may not be billed to YSU. YSU will incur no obligation of liability whatsoever to anyone resulting from issuance of, or activities pertaining to this RFP.
11. Minimum Insurance Coverages and Requirements:

The selected Vendor(s) shall obtain and maintain the minimum insurance coverages set forth below. By requiring such minimum insurance, YSU shall not be deemed or construed to have assessed the risk that may be applicable to the selected Vendor(s). The selected Vendor(s) shall assess its own risks and, if it deems appropriate and/or prudent, maintain higher limits and/or broader coverages.

The selected Vendor(s) is not relieved of any liability or other obligations assumed or pursuant to the contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types.

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Coverages:

- A. Commercial General Liability: ISO form CG0001 or its equivalent. Coverage to include:
- Premises and Operations
  - Personal Injury/Advertising Injury
  - Products/Completed Operations
  - Liability assumed under an Insured Contract (including tort liability of another assumed in a business contract)
  - Independent Contractors

Limits Required: The selected Vendor(s) shall carry the following limits of liability:  
[Minimum Insurance Requirements.](#)

Additional Requirements:

Commercial General Liability (CGL) must include coverage for liability arising from products-completed operations and liability assumed under an insured contract.

If the CGL insurance has a general aggregate limit, then ISO endorsement CG2504 (03/97 Edition) or its equivalent must be added. The Designated Location(s) General Aggregate Limit must be maintained for the duration of the Agreement, and the limit must be twice the minimum required occurrence limit.

The selected Vendor(s) shall name YSU and its Board of Trustees, officers, employees, agents, and volunteers as Additional Insureds on ISO endorsement CG 2026 or its equivalent.

The CGL policy shall contain no endorsement or modification limiting the scope of coverage for liability assumed under a contract or liability arising from pollution.

All Policies:

- Must be written on a primary basis, non-contributory with any other insurance coverages and/or self-insurance carried by YSU.
  - Must include a Waiver of Subrogation Clause.
  - May not be non-renewed, cancelled, or materially changed or altered unless thirty (30) days advance written notice via certified mail is provided to YSU.
12. Non-Discrimination: In submitting their proposal, or performing that which results from an award by YSU, the successful Vendor agrees not to discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment or any matter directly or indirectly related to employment because of race, color, creed, religion, sexual orientation, national origin, sex, age, handicap or Vietnam era Veteran status. The successful Vendor further agrees that every sub-contract for parts and/or service for any ensuing order will contain a provision requiring non-discrimination in employment as specified above. This covenant is required pursuant to Executive Order 11246, Laws and Regulations of the State of Ohio. Any breach thereof may be regarded as material breach of contract or purchase order.
13. Prohibition of Offshore Outsourcing: The Vendor affirms to have read and understands Executive Order 2019-12D and shall abide by those requirements in the performance of this contract, and shall perform no services required under this contract outside of the United States.

[Governor's Executive Order 2019-12D.](#)

The Vendor also affirms, understands, and agrees to immediately notify YSU of any change or shift in the location(s) of services performed by the Vendor or its subcontractors under this contract, and no services shall be changed or shifted to a location(s) that is (are) outside of the United States.

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The Vendor also agrees to disclose if requested by YSU all of the following:

- The location where all services under this contract will be performed by any Vendor;
- The location where any state data associated with any of the services the Vendor is performing under this contract, or seek to provide will be accessed, tested, maintained, backed-up or stored;
- The principal location of business for any Vendors supplying services under this contract.

If any Vendor performs services under this contract outside the United States, the performance of such services shall be treated as a material breach of the contract. YSU is not obligated to pay and shall not pay for such services. If any Vendor performs any such services, Vendor shall immediately return to YSU all funds paid for those services. YSU may also recover from the Vendor all costs associated with any corrective action YSU may undertake, including but not limited to an audit or a risk analysis, as a result of the Vendor performing services outside the United States.

YSU may, at any time after the breach, terminate the contract, upon written notice to the Vendor. YSU may recover all accounting, administrative, legal and other expenses reasonably necessary for the preparation of the termination of the contract and costs associated with the acquisition of substitute services from a third party.

If YSU determines that actual and direct damages are uncertain or difficult to ascertain, YSU in its sole discretion may recover a payment of liquidated damages in the amount of two percent of the value of the Contract.

YSU in its sole discretion may provide written notice to Vendor of a breach and permit the Vendor to cure the breach. Such cure period shall be no longer than twenty-one (21) calendar days. During the cure period, YSU may buy substitute services from a third party and recover from the Vendor any costs associated with acquiring those substitute services.

Notwithstanding, YSU permitting a period of time to cure the breach or the Vendor's cure of the breach, YSU does not waive any of its rights and remedies provided YSU in this Contract, including but not limited to recovery of funds paid for services the Vendor performed outside of United States, costs associated with corrective action, or liquidated damages.

The Vendor will not assign any of its rights, nor delegate any of its duties and responsibilities under this Contract, without prior written consent of YSU. Any assignment or delegation not consented to may be deemed void by YSU.

14. Pricing: Vendors are asked to thoroughly explain their pricing structure in their response. YSU reserves the right to negotiate this and other pertinent terms with the selected finalist(s) and this could become one of the selection criteria used in the award process.
15. Proprietary Information: All evaluation criteria for proposals are non-proprietary and subject to public disclosure after Contract award. All proposals, except for items reasonably identified by Vendor as trade secrets or proprietary information, are subject to public disclosure under Ohio Revised Code Section 149.43. Vendor shall be solely responsible for protecting its own trade secret or proprietary information and will be responsible for all costs associated with protecting this information from disclosure.
16. Provisions: If any provisions in the resultant Agreement are held to be invalid, void, or unenforceable, the remaining provisions shall nevertheless continue in full force and effect without being impaired or invalidated in any way.
17. Quality of Service: The successful Vendor(s) must be prepared to furnish continual high-quality service to YSU. Failure to do so may be considered just cause for cancellation of the Agreement.
18. Right to Set-Off: Upon the occurrence of any default or breach of an Agreement resulting from this RFP by Vendor, the University shall have the right to withhold and set-off against any amount otherwise due to be paid to the Service Provider, for the amount of any such cost, loss, damage, expense, liability, obligation or claim resulting from Vendor's default or breach of this Agreement. Neither the exercise of,

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nor the failure to exercise, such right of set-off will constitute an election of remedies or limit the University in any manner in the enforcement of any other remedies that may be available to it.

19. Sales Tax: YSU, as an instrumentality of the State of Ohio, is exempt from Ohio sales tax and Federal excise tax, including Federal transportation tax. An exemption certificate will be furnished by YSU upon request.
20. State Law: Any Agreement entered into as a result this solicitation will be governed by the laws of the State of Ohio.
21. Use of Data: Vendor agrees that it will keep confidential the features of any technical or proprietary information furnished by YSU and use such items only in the production of items awarded as a result of this inquiry and not otherwise, unless YSU's written consent is first obtained.
22. Contract Term
  - a. The University intends to award a multi-year Agreement. The parties will negotiate the length of the Agreements.
  - b. The University maintains the right to terminate this Agreement and any additions upon failure of the Vendor to abide by the terms and conditions of the Agreement and performance specifications. The University will give sufficient notice to correct all outstanding issues and deficient performance connected to this Agreement. If not corrected in the specified time, the University may notify the Vendor, in writing, of the intent to terminate the Agreement. The Agreement will be terminated sixty (60) days after notification.
  - c. No subcontracting or assignment of Agreement without prior written consent and approval of the University.
23. Revisions to RFP
  - a. In the event that it becomes necessary to revise any part of this RFP prior to the assigned return date, revision will be provided by YSU's Procurement Services, or designee, to all respondents involved in the RFP. Changes in the specifications will be provided to all respondents through an addendum made by Procurement Services.
  - b. YSU will be the sole determinant of whether any revisions/addenda should be issued as a result of any question or other matters, and may extend the proposal deadline, if in YSU's judgment such information significantly amends this solicitation, or makes compliance with the original proposed due date impractical.
24. Selection Criteria
  - a. The selection of the successful Vendor(s) for this proposal will be determined solely by YSU. All proposals will be reviewed very closely for areas such as, but not limited to the following:
    - 1) Quality of products/services
    - 2) Ability to consistently perform (quality, delivery, lead-time, etc.)
    - 3) Program proposal that meets or exceeds YSU's needs
    - 4) Pricing and discounts offered (not singular determining factor)
    - 5) Size and scope of the promotional program

### SECTION III

#### RFP Response Instructions

1. Vendors may submit questions to [procure@ysu.edu](mailto:procure@ysu.edu). All questions must be submitted via email as indicated on the Schedule of Events and include **RFP #24-012224 – Ultra-High Resolution Micro-Precision 3D Printing System** in the subject line. Questions submitted by the deadline will be answered via email and will be sent to all RFP participants.
2. During the YSU competitive proposal process, up to and including the issuance of an award letter, under no circumstances may a Vendor contact other individuals at YSU to discuss any aspect of this inquiry or attempt to influence the process. Failure of a Vendor to comply with this protocol may invalidate their proposal response.

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3. Proposal Instructions
  - a. Complete the RFP cover sheet (page 1 of this RFP)
  - b. Complete Section IV of this RFP by submitting your responses directly into your proposal.
  - c. Proposal Package Requirements. The following **MUST** be included in the proposal-response package by the proposal due date/time; failure to do so may invalidate the proposal response:
    - (1) Signed and dated RFP cover sheet.
    - (2) Proposals exactly as specified in this RFP in email or physical copy as outlined on the Cover Sheet  
**Note: Some proposals may take time to be received by the email inbox, especially with larger files attached, so please send your proposal email in advance of the deadline and early enough to consider receipt lead time**
    - (3) Agreement to all terms required within this RFP.

### SECTION IV

#### Scope of Work and Proposal Specifications

**General Scope of Work:** YSU is seeking proposals from qualified Vendors to provide a 3D Ultra-High Resolution Printer with Micro-Precision as per the specifications provided. Installation, training and start up supplies need to be included in the proposal along with noting the cost of annual maintenance, or service contracts and cost of additional suppliers.

See instructions on attachment for bid specifications table.

BID SPECIFICATIONS		
Equipment Specifications	Type	Yes/No/Alternative
The printing technique of the equipment shall be projection micro stereolithography(PμSL).	Desirable	
Capable of producing full 3Dimensional micro-fabrication freeform geometries including 3D surfaces, internal channels, holes, meshes, overhangs, shoulders, steps, bridges, and undercuts.	Mandatory	
Possible to print on top of own substrates, e.g., PCBs, therefore requiring manual and auto focus, manual start position, X, Y, Z jog modes. Autofocus function is provided to place surfaces on the focus plane of the lens.	Mandatory	
Must be able to create a 60° (from 0° vertical) 3-dimensional overhang without requirements for support structures, and this angle must increase to 90° for shorter overhangs below 1mm or where there is surrounding geometry attached, e.g., must be able to create a 2x2mm square tunnel within a solid model without the need for support structures to hold the tunnel up.	Mandatory	
Camera system for X Y alignment to e.g., markers on substrate by camera view/stage.	Mandatory	
Laser system for Z alignment to enable 10μm leveling accuracy across whole build area.		
Z Layer thickness variably adjustable throughout build between 2μm-40μm, although 2μm-5μm will not need to be demonstrated but should be possible for use with future resin development.	Mandatory	
The equipment must be able to print with minimal 3D feature size of 50μm or better.	Mandatory	
Print speed shall allow rapid photo polymerization of resin volume equal to or larger than 11000million μm <sup>3</sup> (11mm <sup>3</sup> ) within a 10 second timeframe.	Mandatory	
The optical light engine shall be DLP (Digital Light Projection).	Mandatory	
The wavelength of optical Light source shall be 405 nm.	Mandatory	



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Precision optics and precision motion control where the accuracy of the stages is 1um to ensure highest quality of model finish. Please give specification.	Desirable	
Light source power output adjustable from 0-100mW/cm2.	Mandatory	
Light source capable of projecting 8bit, 16bit or 24bit images with gradient grayscale to enable fine control of curing on edges of light image.	Desirable	
Light source duration is adjustable between 0-9 seconds in tenth of a second increments.	Mandatory	
Vibration isolation optical platform.	Desirable	
The equipment needs to be capable for running with 405nm resin formulations prepared by the customer or sourced from other suppliers. (Open Material System).	Mandatory	
The equipment needs to be capable for running with resin formulations, composites and ceramics up to a viscosity of 20,000cP.	Mandatory	
The bidder shall clarify any accessories that help improve the processing resolution or output quality: e.g., optical monitoring system, auto focusing system, floating stage.	Mandatory	
Equipment has a process to remove air bubbles from the resin before polymerization, to ensure no air bubbles are inside the cured model, e.g., bubble removing blade attachment.	Mandatory	
The equipment needs to have single exposure size bigger than 19mm (X), 10mm (Y), or over 190mm <sup>2</sup> with an optical resolution of 10µm.	Desirable	
The equipment needs to be able to support stitching mode and array mode to achieve a full print area of 100mm (X), 100mm(Y), 75mm (Z) at an optical resolution of 10µm.	Mandatory	
The equipment can make one object at least 100mm x 100mm x 75mm in size.	Mandatory	
The equipment shall have the capability of maximum printing object height of 75 mm or better.	Desirable	
The bidder shall clarify their motion stage (X, Y and Z axis) resolution and bidirectional repeatability is equal to or below 1µm in all directions.	Desirable	
The bidder shall clarify the available communication ports (hardware + drivers), types and choice of upgradation available for the equipment.	Desirable	

Software & Operation Interface	Type	List Capabilities
Software should suitably slide 3D objects into images suitable for the equipment, and have adjustable parameters to set:	Desirable	
<ul style="list-style-type: none"> <li>· STL file open</li> <li>· Image pixel resolution setting</li> <li>· Image file naming</li> <li>· Load multiple 3D files into one build</li> <li>· Printing direction</li> <li>· XYZ scaling</li> <li>· Rotate</li> <li>· Layer thickness</li> <li>· Translate</li> <li>· Flaw detection</li> </ul>		

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The equipment operation interface shall allow the operator to adjust key processing parameters, e.g.: UV intensity	Desirable	
<ul style="list-style-type: none"> <li>· Exposure time</li> <li>· Individual layer thickness</li> <li>· Membrane-sample separation distance</li> <li>· Full adjustment for auto focus</li> <li>· Light intensity</li> <li>· Light duration</li> <li>· Stitching overlap</li> <li>· Bubble scrapper frequency</li> <li>· Roller frequency</li> <li>· Motor speeds and accelerations</li> <li>· Dwell times for resin levelling</li> <li>· Projection monitoring system with camera view. The equipment operation interface shall allow:</li> <li>· Three (3) printing modes: single, stitching multiple and array mode</li> <li>· Parameters to be saved and loaded for future use</li> <li>· In Stitching mode printing process to bypass the images with no feature to save printing time</li> <li>· Automatic calculation of the array size based on the array gap input</li> </ul>		
Any licensed required software has a perpetual term for the machine, and that input STL files can be produced on standard software (Blender, Solidworks etc.)	Desirable	
Equipment supplied with Control computer, LCD Display, keyboard and mouse.	Desirable	

### A. Vendor Qualifications

Vendor shall have a minimum of three (3) years' experience in providing similar equipment, training, and maintenance service as described in specifications. Provide this information in your proposal:

### B. Supplier proposals need to include:

1. A minimum of three (3) professional references and contact information (name, title, organization, phone number, email) of at least one individual that could be contacted by YSU regarding their professional experience with your firm.
2. Details regarding your firm:
  - a. What is the background of the firm including size, experience, market position, location and headquarters, and date of founding?
  - b. How long has your organization been in this industry?
3. Base price for equipment, listing manufacturer and model number (completely installed) and separate pricing for optional equipment and accessories if desired by YSU.
4. Lead time for equipment.
5. Length of time to install equipment, train instructors and staff, after receipt of YSU request to do so.
6. Required site preparation requirements.
7. Detail listing of consumable supply items life expectancy and costs.
8. Maintenance schedule with expected replacement items and cost.

### C. Contract Terms of Proposal

This agreement shall encompass turn-key installation of the unit proposed.

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1. The University and the Contractor may negotiate addendums to specifications and the financial terms if circumstances dictate such as necessary.
2. The University maintains the right to terminate this Agreement and any additions upon failure of the Contractor to abide by the terms and conditions of the Agreement and performance specifications. The University will give sufficient notice (minimum of seven (7) days) to correct all outstanding issues and deficient performance connected to this Agreement. If not corrected in the specified time the University may notify the Contractor, in writing, the intent to terminate the Agreement. The Agreement will be terminated sixty (60) days after notification.
3. No subcontracting or assignment of Agreement without prior written consent and approval of the University.

### D. Evaluation

The evaluation team will evaluate and score each proposal based on the following criteria:

Criteria	Weight
Cost/Pricing	20%
Meeting Specifications and Requirements	70%
Experience and Qualifications	5%
Proposed Timeline for Installation and Training	5%

For evaluation purposes, the following criteria shall be defined as:

**Experience and Qualifications:** Demonstrates that organization has the resources, e.g., qualified and experience team, to successfully lead the project to completion. Demonstrates through references and detailed explanation within response that organization has usefully or successfully completed similar projects.

**Responsiveness to RFP:** Includes all requested information in a structured format. Detailed explanation and descriptions are given for all requested information.

**Proposed timeline:** Demonstrates capability to provide services in a timely manner through proposed timeline using Gantt chart or other similar documentation.

### E. Addendum A – Attached Exhibit A – Specifications and Requirements sheet

#### Revisions to RFP

In the event that it becomes necessary to revise any part of this RFP prior to the assigned return date, revision will be provided by YSU's Procurement Services, or designee, to all Respondents involved in the project. Changes in the specifications will be provided to all Respondents through an addendum made by Procurement Services.

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YSU will be the sole determinant of whether any revisions/addenda should be issued as a result of any question or other matters, and may extend the proposal deadline, if in YSU's judgment such information significantly amends this solicitation or makes compliance with the original proposed due date impractical.

Written requests for proposal results must include the proposal name, number and closing date.